

„In physical nature we never count on miracles; we notice laws that we find everywhere equally effective, unchanging and regular. How could the kingdom of mankind, with its powers, changes and passions, escape from this chain of nature?"

Herder.

V ordeal.

In the winter of this year, it will be just one hundred years since the day on which Herder began working on the work that was to occupy him the longest and most enduring of all his works from then on: the "Ideas on the Philosophy of the History of Mankind"/⁴ Even if this mighty creation by this man of deep and broad vision remained unfinished, its influence on the views of his contemporaries and posterity was nevertheless universal, profound and enduring. By being the first in Germany to subject man and his nature to a purely natural, strictly physiological view, in contrast to the philosophical-metaphysical or one-sidedly religious approach that had been common until then, he inaugurated the direction that actually gives the scientific endeavors of our day their characteristic imprint. It is he, therefore, who can rightly be regarded as the real father of modern anthropology and the anthropological treatment of history.

Even if after Herder there was no lack of attempts - I recall Fr. Schlegel, Hegel, Bunsen - to reassert the purely ideological and speculative view of the history of mankind, and even in the present day there is no lack of such endeavors, they have only ever achieved temporary significance. In the long run, it was not possible for them to bring to a standstill the endeavors aimed at researching the facts and the natural connection of things. Indeed, we can even see that the opposite tendency has been making itself felt for some time now and that the former relationship between the so-called humanities and the natural sciences has changed.

and as such history - and the natural sciences

almost reversed: a number of disciplines that previously belonged without contradiction to the humanities

are currently being vigorously pursued by the

representatives of the natural sciences for the latter

and it must already be recognized today that the

The successes achieved to date in this direction make these claims appear entirely justified.

Since Herder, our positive knowledge of all things relating to man and his history has increased immensely; our horizons have expanded spatially and even more temporally in an unexpected way. In particular, it is the prehistoric sciences and linguistics that have brought

to light such an important new body of knowledge, such a sum of new insights, that no special justification is needed for anyone who undertakes to summarize these previous results in a methodical treatment in order to create a foundation on which the proud construction of later history can surely rise. Without an elucidation of the pre-historical periods, however, the understanding of this later history must often remain obscure, just as it would be impossible to gain a full understanding of the history of an individual human being from a biography which, ignoring childhood, boyhood and youth, only wanted to take manhood as the subject of its description. But as little as such a biography would meet our legitimate requirements, just as little can the conventional treatment of the history of mankind satisfy us, which, instead of tracing the genetic process of its becoming as far backwards as possible and drawing all peoples into the circle of its representation, is content to acquaint us merely with the history of the manhood of some peoples, without considering that a full understanding of the history of mankind is only possible if all parts of it are taken into consideration in the same way.

The bearers of history are the peoples. From this, the great importance of ethnology or ethnography is self-evident.

Ethnology for anyone who sets themselves the task of researching historical events and their internal context. Ethnology, for its part, is primarily based on anthropology and linguistics, the results of which it summarizes and processes to a certain extent. Of these two main auxiliary disciplines of ethnology, anthropology - which is particularly important to note - has the recognized character and validity of an exact natural science; its results bear the stamp of irrefutable certainty. But the results of linguistics also have the same validity to a certain extent.

With the help of ethnology, which is based on the results of anthropology and linguistics, it should now be possible to introduce history into the circle of the natural sciences and to learn to understand historical processes as lawful, just as one has already recognized the strict lawfulness of most of the processes that take place in the realm of physical nature. In this, ethnology may be destined to play the same role as chemistry has within the natural sciences, which has also often proved that bodies are composed of two or more elements that were previously believed to be simple. What the elements or basic materials are for chemistry, the races are for ethnology. It has already been proved that a number of peoples are composed of two or even three racial elements, which until recently were regarded as a unified whole. And just as it is the task of chemistry to determine the properties of the various basic substances and to investigate their relationship to one another, it is also the task of anthropology to learn about the somatic and psychological properties of the various races and to study the physical, linguistic and socio-political forms that result when two or more races come into closer contact with one another.

If people belonging to two or more races live side by side in any country, then either the members of one or the other race immigrated later. The cause of these immigrations,

however, lies not at all in the difference of the races as such, but rather in the general conditions of existence of man in general, which it is no longer the business of anthropology in the strict sense to explain, but rather the business of a separate science, namely biology, just as there is a series of chemical processes which arise not so much from the difference of the basic substances as from general properties common to all bodies, especially the properties of motion (light, heat, electricity, etc.), and the determination of which is the task of physics. Therefore, just as physics complements chemistry, so biology complements anthropology.

However, anthropology as a purely racial theory, together with biology, would by no means always be able to explain the origins and subsequent course of all the movements of peoples that have taken place over the millennia if it were not for the helpful support of history in conjunction with its auxiliary sciences - comparative linguistics and archaeology. Only historical anthropology makes it possible to place the palaeontological finds in the right context and to establish the connection between the prehistoric periods and the actual historical time.

In particular, it is often only through comparative linguistic research alone that we gain knowledge of the former presence of a racial element within an ethnic group, of which not even the slightest traces can currently be detected by anthropological analysis. If, however, the extinct racial element did not succeed in making its language the dominant one within the ethnic group or in leaving behind any other historical evidence, then it is generally impossible for us to determine the former presence of this element alongside the racial element that is still present. In this case the anthropologist is in the same position as the chemist would be if he were asked to state whether a certain quantity of an element which occurs freely in nature, such as gold, has been free from the very beginning, or whether it is to be regarded as the free residue of some dissolved chemical compound.

In another respect, however, the advantage is decidedly on the side of the anthropologist over the chemist. It is well known that of the 63 chemical elements known to date, only very few occur freely in nature, but that most of them are combined with others and must first be separated from this combination by artificial means. On the other hand, there is no race that has not been preserved, at least in part, in an unmixed state to this day. This circumstance puts us in a position to undertake the anthropological analysis of any ethnic body composed of various racial elements with great ease. Added to this is the no less important circumstance that all the races were formed before the present geological period began, and we can therefore operate with their somatic and psychological characteristics as constant factors.

All compound chemical bodies are subject to decomposition under certain circumstances. This is known to take place in such a way that, under the influence of heat, some element is eliminated from the former compound. History teaches us that

even ethnic bodies composed of different racial elements can be subject to decomposition. In this case it is as a rule the social-political organization, in the dissolution of which the decomposition of any ethnic body as a result of the elimination of a racial element is most clearly documented. It is a curious fact that it is precisely within the Aryan group of peoples that most such disintegrations can be traced. I only recall, to point out the obvious, the social and political upheavals that have been taking place within the Germanic world for a hundred years: the collapse of the Germanic feudal order in France, Germany and Austria, the loss of the political rule exercised by Austria as a German state in Italy and Hungary, the loss of the political independence of the states of Southern Germany, etc.

Anthropology alone is able to give the correct explanation for all the processes in the field of social-political life touched upon here: it lies in the numerical decline of the Aryan-Germanic racial element within the peoples first considered here, in their physical de-aryanization, so to speak, which, since the anthropological transformation was not accompanied by an ethno-linguistic transformation, has remained unnoticed for so long. But the reason why this decline has taken place is due to the fact that the Aryan race, as I shall show, is an eminently Nordic race, which does not survive for long in more southerly countries, but sooner or later succumbs to the effects of the warmer climate, unless the gaps that occur are constantly filled by a new influx from the old homeland. As this was not the case in the countries mentioned, however, the Aryan element, which in France as well as in southern Germany originated from the time before the Germanic occupation, gradually gained the majority and the dissolution of the social and political organization in the country itself, which had hitherto existed and was supported by the Aryan element, as well as the loss of the rule established by the same element in other countries, was only a question of time. But where the Aryan element found the climate appropriate to it, it retained its full old strength and with it its full old importance, and it is from this that the political leadership of Germany passed from the south, which had become less Germanic, to the north, which had remained more Germanic, and that the English were able to extend their rule to such an extent, that was rarely achieved in the course of world history,¹ and that they were still able to assert their social-political supremacy over the extremely numerous Anarian elements of their vast empire to the full extent. For the same reason, the North Germanic peoples (Swedes, Norwegians, Danes) have maintained the productivity that characterizes the Aryan race to such a high degree to this day, and Sweden and Norway, for example, were able to transfer nothing less than 1,300,000 people to the United States in 1871-78 with a relatively small population, and the number of emigrants has increased significantly in the following years! Similarly, in the old Polish nobility, the old Aryan population, which has remained relatively unmixed, has been preserved solely through the protection of the colder climate of Eastern Europe, while in most of the southern

countries of Europe and Asia the former presence of the Aryans can be traced almost exclusively by linguistic and historical means.

. This book deals first of all with a number of questions of historical anthropology, the decision of which is of great importance not only for anthropology but also for history and linguistics, such as the question of the physical type of the Aryans, their homeland, the relationship of the Aryan race to the fossil and still existing human races, the oldest migrations of the Aryan peoples, their composition and so on. I believe that I have made a significant contribution to the unified understanding of historical processes in historic and pre-historic times. It has appeared to me that since the present geological period the driving forces of history have remained unchanged and that their direction has essentially not undergone any change, and that only in the latter respect has the New Age (since the discovery of America) been a perhaps only temporary exception. I then used the results obtained in the field of historical anthropology and Aryan ethnology to give the comparative grammar of Aryan languages its natural basis in the anthropology of Aryan peoples. In view of the fact that Aryan linguistics is becoming more and more methodless, fanciful and shallow, it can only be of benefit if it is affiliated to a discipline which, due to its exact scientific character, is not apt from the outset to degenerate into a playground for subjective velleities.

Währing, May 1883.

K. Penka,

Professor at the Imperial and Royal Grammar School in Vienna's IXth district.

CONTENTS.

Section One: The Midlands Race	
Second section: Physical type of the Aryans.....	
Third section: Home of the Aryans	45
Section four: Origin of the human race.....	72
Fifth section: Origin of the Aryan peoples.....	89
Sixth section: Phonological character of the basic Aryan language.....	154
Seventh section: Morphological character of the Aryan basic languages.....	173

"The linguistic unity of two peoples proves their natural unity just as little as, conversely, linguistic diversity proves their natural unity.
/ natural diversity."

A. v. Middendorff.
"Ethnic groups are transient. Countless peoples have sunk into the yawning womb of time. The Itacen from which they were built remained, they endure with all their characteristic. They with characteristic characteristics." Kollmann.

FIRST SECTION.

The midlands race.

Since Fr. Bopp provided incontrovertible proof that I most of the European and part of the Asian
! languages go back to a common .basic language, it was necessary to
hei all linguists believe that the bearers of these i languages, the individual Aryan
peoples - Germanic, Celtic, Ita
"i likers, Greeks, Slavs, Lithuanians, Tranians and Indians - likewise a
ihave a common origin. From the original unity of the
! languages has been reduced to the original unity of these languages.
[speaking peoples closed¹) and this conclusion seemed so compelling,
■ its foundation so secure that we should not be surprised
needs, even if ethnologists have recognized it and made it the basis of their
classification of peoples, j
'^x) Thus Müller, the most outstanding representative of the linguistic eth
nology, expressed this view as follows (Geogr. Jahrbuch. III. 314):
"And just like the languages, whose development we can often trace historically
point back to an original language that no longer exists, as whose ■ grandchildren use it
! the peoples who speak these languages are to be regarded as
I , to an original people from which they separated through separation.
have developed."

Pe nk a, Origines Ariacae.

And so in our ethnological handbooks we see the Aryans or Indo-Europeans listed alongside the Semites, Hamites and Caucasians as a separate ethnic group within the Caucasian or Mediterranean race. However, while the peoples of the Semitic division, the Arameans, Assyrians, Babylonians, Hebrews, Phoenicians and Arabs on the one hand and the peoples of the Liamite group, the ancient Egyptians, Berbers and Guanches on the other, not only share a common origin of their languages, but also the same physical habitus, but also the same physical habitus and the same psychological character, indeed even the most competent

linguists have been able to assert the original unity of the Semitic and Hamitic languages and the comparison of the somatic constitution of the Semites and Hamites also points to a common origin²), conversely, we see that not only are the Aryan languages in no genealogical connection with the languages mentioned above, but that the Aryan peoples also show such differences in their physical and psychological characteristics as are usually only observed between different races, but not between the different peoples of one and the same race. Standing abruptly and abruptly beside the type of the dolichocephalic Semite with his delicate physique, the oval

¹) Peschei, Völkerkunde. Leipzig 1877, p. 540; Fr. Müller, Allgemeine Ethnographie. Vienna 1879, p. 580; H. Kiepert, Handbuch der alten Geographie. Berlin 1878, p.-21.

²) Lauth (Aus Aegyptens Vorzeit. Berlin 1881, p. 66) comments on this as follows: "If one examines the physiological constitution of the inhabitants of Egypt, as far as the material is available in mummies, one gets the irrefutable impression that they belonged to the same race as the inhabitants of the Near East, and therefore probably also came from the same stock. This affinity is proven even more clearly by the language: The further one progresses in the knowledge of the Egyptian idiom, the closer the relationship with the Semitic languages becomes apparent." And A. Retzius (Müller's Archiv für Anatomie, Physiologie und wissenschaftliche Medicin. 1858, p. 124) has already made the following judgment: "The Carolinian Institute possesses a considerable collection of African skulls; from North Africa from Abyssinians, Copts, Berbers and Guanches; they all have the same skull formation: large, spacious, oval skulls, very similar to those of the Arabs." - He also notes on p. 135 that the Guanches and the other tribes in North Africa related to them are very similar to the Jews in terms of both facial and cranial structure.

On the one hand, the Slavic type with its brachycephalic skull shape, broad and short face, flat and short nose, low beard growth, and on the other hand, the dolichocephalic Germanic-Scandinavian type with its tall stature, narrow face, high, narrow and straight nose, blue eyes and blond hair. Those Aryan peoples of Earopa, however, who, in view of their physical habitus, one might be most inclined to regard as intermediate members between the Asiatic Semites, the African Hamites and the Aryans of Europe of the Germanic-Scandinavian type, are the inhabitants of the three large peninsulas of southern Europe, who are still today, despite all crossbreeding with other elements, for the most part dolichocephalic and for the most part of dark complexion, of whose ancestors, however, the original inhabitants of Greece - the Pelasgians - Italy and Sicily - the Japygians and Siculians - and Spain - the Iberians - it can be assumed with the greatest probability that they were exclusively dolichocephalic and of dark complexion, cannot be considered here, if only because the latter demonstrably spoke no Aryan languages and therefore their descendants cannot be considered true Aryans in terms of their ancestry. according to their descent. The question of the Mediterranean race becomes even more difficult when

the results of recent studies on the kinship of the peoples of Africa are taken into account. If all the peoples inhabiting the Black Continent really form only one tribe, as R. Hartmann¹) has tried to prove, if the Hamitic peoples of North Africa are really closely related to all the other peoples of this part of the world²) (the Bedshah peoples, the Nigritians and the Bantu tribes with the transitional tribes of the Teda, Gala, Somali, Fulah), then it is not possible to say that they are really Aryans.

¹) R. Hartmann, *Die Nigritier*. I. Berlin 1876.

²) According to Eurnpaeus (*Diefinnisch-ungarischen Sprachen und die Urheimat des Menschengeschlechtes*. Helsingfors, p. 2) there is also a close relationship between ancient Egyptian and the Central African languages. "The relationship between the Semitic-Basque-African numerals has recently been confirmed in the most decisive and interesting way by the complete decipherment of the ancient Egyptian numerals written in hieroglyphics. The greatest connoisseur and researcher of ancient Egyptian of our time, Mr. Brugsch, speaks out in the preface to the first and third editions.

1*

It is probably no longer worth thinking about maintaining the old Caucasian race of Blumenbach, the Midland race of Fr. Müller, HaeckeF and PescheF in its traditional scope and structure. If, however, we exclude the Hamites from it, we must also exclude the Semites because of the Hamito-Semitic linguistic and racial unity already emphasized above. Only the Aryans and Caucasians would then remain. But even the Aryans do not show the slightest linguistic or physical relationship with the numerous peoples of the Caucasus, even in their most pronounced types - the Germanic-Scandinavian and the Slavic - so that if the name of the Caucasian race is to continue to exist as such, this is only possible if it is restricted exclusively to the Caucasian peoples. Considering, however, that most of these peoples* cannot easily be separated from the Semitic peoples because of the similarity of their physical habitus, it is probably most advisable to classify the former as a subdivision of the Semitic_u group, even if a genealogical connection between the numerous languages of the Caucasus and the Semitic languages has not yet been proven.)¹

It has already been indicated above that even within the Aryan language group there are two great contrasts in the Germanic-Scandinavian and Slavic types. However, this by no means exhausts the number of types occurring within the Aryan peoples. In Europe we also distinguish two Celtic types, and in Asia the Iranian and Indian types. Indeed, even within the individual subdivisions of the Aryan group, especially in the Germanic division

In the second volume of his excellent *Ancient Egyptian dictionary*, he argues most decisively in favor of the relationship between the Semitic languages and Ancient Egyptian, and yet the Ancient Egyptian numerals are by far more closely and clearly related to those of the Central African languages or the Ilousa group than to the Semitic ones." Several researchers (such as Bleek and Lepsius) even assume that the Hottentot language is related to Egyptian, an

assumption that Müller (*Allgemeine Ethnographie*, 116) decisively rejects.

What one of the most eminent anthropologists of the present day, A. Ecker, remarks on the midland race (*Archiv für Anthropologie*. XI. 366) is in agreement with the results of these considerations: "One may only read the attempts to characterize a midland race according to physical features in ethnographic textbooks in order to convince oneself of the impossibility of doing so; the fluctuations that must necessarily be admitted are such that hardly anything solid remains."

The greatest differences can be found in the physical habitus and probably also in the psychological character.

In southern Germany and Switzerland, brachycephaly and dark complexion predominate; the further north we go, dolichocephaly and light complexion increase steadily. Finally, in the Scandinavian countries we find almost exclusively the dolichocephalic skull shape with blue eyes and blond hair. It is well known that there is also a mental difference between the South German and the North German, or the North Germanic. The situation is similar in France, where the blond type is also far more common in the north than in the central and southern parts of the country.

In view of these facts, it is no longer possible to speak of the common origin of the Aryan peoples, of their tribal unity. If this is still maintained, even by ethnologists who are aware of the above-mentioned differences in the type of the individual Aryan peoples, this clearly shows the supremacy which the relatively young science of linguistics has attained over its older sister. It is probably rare in the history of science that a science such as ethnology, which is called upon to uncover the origin and relationship of each individual people on the basis of a comparative study of its physical and mental characteristics, its social and political conditions, its religion and language, its historical destiny, and which therefore has the obligation to tackle its task in an all-round manner and from the most diverse angles, has subjected itself to the leadership of a science that deals with only one of these aspects - language - in a one-sided manner. However, classical ethnology finds itself in a particularly difficult position with regard to the Aryan peoples, inasmuch as the assertion of the anthropological aspects mentioned above would have to tear apart even those peoples who have always presented themselves as an ethnic unity, such as the German or Italian peoples, through the commonality of language, customs and historical destinies.

In this relationship of dependence between ethnology and linguistic research, it was not possible for the former to exert any influence on the latter. However, linguistic research itself did not suffer the least from this relationship. In any case, it would have been to its great advantage if, from the very beginning, it had been accompanied by an ethnology which, instead of being a reflection of the research results of the former, had developed more independently with the help of the other resources of its discipline. Such an ethnology would have provided the comparative

linguist with information about things that are of the utmost importance for his investigations, but which either do not emerge at all or only imperfectly from studies focused purely on language as such. Of course, linguistic research to date has not even been aware of the lack of such an ethnology and, even if it had been available in the desired form, its teachings would hardly have been utilized in the service of linguistic research as long as a view of language prevailed which, with a strange, almost incomprehensible misjudgment of its subjective character, regarded it as an autonomous organism, as it were independent of the speaking subject. At present, this view, which was mainly supported by Schleicher, can probably be regarded as generally abandoned and, following on from W. von Humboldt, language has once again been recognized as what it really is, as the organic product of an organism subject to organic laws. This realization, however, leads, as it were, of its own accord and with inner necessity to the comparative study of the mental and physical organization of the various ethnic individuals speaking different languages, i.e. to ethnology as the science of language. Ethnology as the science which has made this study its special task.

However, if anthropology is to fulfill its task, it must abandon its previous one-sided linguistic basis. It is no longer acceptable to ignore the results of anthropology, which has been developing with surprising speed over the last twenty years, and in particular those of prehistoric archaeology and craniology.¹⁰) Above all, it is the latter that appears to be called upon to steer ethnological and, indirectly, linguistic research in new directions. "The dissolution of ethnic units into their racial elements with the help of craniology," Kollmann remarks in his treatise on European human races¹¹), "gives, it seems to me, only the guarantee to understand the structure of peoples in the past, as well as to recognize their true composition in the present. This strictly analytical method will lead to results which will also be of some value to all those sciences which are working on the elucidation of the earlier history of mankind."

If contradictions arise between the results of anthropology and those of linguistics - and they have already arisen many times - then one should not be content with simply stating them, but should also try to resolve them. And one can approach this task with all the greater hope, since both disciplines - anthropology and linguistics - are based on empirical foundations and enjoy a strictly methodical treatment. To this end,

10) Even Gerland, otherwise inclined to claim a higher validity for language than for physics in ethnology, cannot help but declare in his lecture: "Ueber das Verhältniß der Ethnologie zur Anthropologie" (Verhandlungen des zweiten deutschen Geographentages zu Halle im Jahre 1882. Berlin 1882, p. 55): "Of course it (ethnology) can never and nowhere do without anthropological investigations, it needs them,

11) but admittedly only as an auxiliary science." However, Gerland also rightly emphasized that anthropology cannot do without ethnology.

■) Mittheilungen der Wiener anthropol. Society. XI. 8.

however, it is above all else necessary for both sciences, which have hitherto gone their own ways without concern for each other, to come closer together in order to reach an understanding on the disputed points through mutual instruction. Ignoring each other can in no way be beneficial.)¹²

12') B enfey in the preface to the first edition of Fick's "Wörterbuch der indogerman. Grundsprache" IX. He also expressed himself on this question in the same sense in the Beil. d. A. A. Z. No. 208, 1875.

^{a)} The Greek. The Greek name of the lion (Xfc, X^wv) is most probably a borrowing from the Semitic (hehr, laish) and the Aryan origin of the name can by no means be regarded as certain, despite Pauli (Die Benennung des Löwen. Munich 1873). This removes one of the main supports for the Asiatic hypothesis.

^{s)} L. Geiger, Zur Entwicklungsgeschichte der Menschheit. Stuttgart 1871, pp. 113-150.

SECOND SECTION.

Physical type of the Aryans.

It cannot be assumed that the Aryans were already divided into a number of types before their separation, but it goes without saying that we must think of them as a unified people consisting of homogeneous elements. The question now arises as to which of the above-mentioned types is to be regarded as the original and specific Aryan type. This question is immediately linked to another, no less important question: the question of the original homeland of the Aryans. It is well known that for a long time the general view was that Asia, namely the source area of the Oxus and Jaxartes, was to be regarded as the cradle of the Aryans. ') From this point on earth, they would then have gradually spread across the rest of Asia, which they later inhabited, and across Europe. The first to oppose this view and declare Europe to be the original homeland of the Aryans was the Englishman Latham,^x) who pointed out the illogicality of assuming that the Indo-Europeans of Europe, who occupy a larger area and show more varieties than the Indo-Europeans of Asia, had migrated from the latter country. "To deduce the Indo-Europeans of Asia, in ethnology, is like deriving the reptiles of Great Britain from those of Ireland in herpetology. " As correct as Latham's argument is, it was by no means sufficient to shake the firmly rooted view of the Asian origin of the peoples of Europe, which was supported by age-old traditions. More convincing evidence was needed. It was not until 1868 that Benfey[†]) presented this evidence, and he deserves credit for bringing this important question back into flux. His arguments are taken from the lexicon of Aryan languages. He pointed out that in the earliest times the Aryan peoples knew only those animals (bear, wolf) and plants (birch, beech) which belong to the temperate zone and above all to Europe, while acquaintance with the fauna and flora of southern Asia (lions²), tigers, palm trees) can only be proven among the Persians and the Indians. Lazar Geiger³) has dealt with the same question in more detail. . He has shown that the primitive Aryans already knew the birch, the beech and the oak, trees which do not belong to tropical Asia, and that of the cereals they knew barley and rye, but not wheat, and that they were also familiar with the European woad plant and its use, as he also pointed out that the common vocabulary contains terms for snow and ice, for winter and spring, but not for summer and autumn. On the basis of these facts, Geiger comes to the conclusion that the original homeland of the Aryans must be sought in Europe, but not in Asia. "For the time being," he concludes his ingenious essay on the original home of the Indo-Europeans, "only one of the two opposing hypotheses is supported by reasons; no

evidence has ever been produced for the migration from the east. Whoever therefore shies away from hypotheses must at least be fair and be modest about not knowing anything about the question at hand. But if he wants to give preference to one hypothesis, I believe he will have to do so to the one that is relatively best substantiated, even if the reasons are not sufficient for a real decision."

Whatever arguments were put forward against Benfey's and L. Geiger's (e.g. by Höfer and Wolzogen), they have nevertheless not failed to have an effect, and from year to year the number of linguists and ethnologists who speak out unreservedly in favor of Europe as the original homeland of the Aryans increases. Müller¹³), Cuno¹⁴), Peschei¹⁵), Pösche^{16 17}), W. Tomaschek¹⁸), Fligier.⁶) However, one might think that, for the reasons given, it was not necessary to abandon Asia as the original Aryan homeland; there might be areas in the north of Asia whose fauna and flora would correspond better with the linguistically developed fauna and flora that once surrounded the original Aryans than is the case with southern Asia. In fact, it has already been decided to relocate the original Aryan homeland further north in Asia, even if not for the reasons given above. It was Piëment who, based on the assumption that a part of the domestic animals currently native to Europe originated in High Asia, asserted in one of the above-mentioned meetings of the Paris Anthropological Society devoted to the discussion of the question of the original homeland and the original type of the Aryans that the original homeland of the Aryans must be sought in the region of Lake Balkash (roughly between the latter and the Alatau).¹⁹) Opposition to this immediately arose within the Society itself, however, and it was Mde. Clemence Royer, who convincingly demonstrated the inadmissibility of such an assumption. "C'est contrairement," she said,²⁰) "à toute probabilité, à toute analogie, à toute logique, qu'on voudrait chercher son (der Arier) berceau dans la haute Asie, en plein indigénat mongolique parmi des populations d'un génie linguistique tout différent, qui parlent toutes des langues agglutinantes quant à leurs formes grammaticales et dont lexicque est absolument différent." - "Il faut partir d'un principe

13*) Fr. Müller, Allgemeine Ethnographie 87.

14) Cuno, Forschungen im Gebiet der alten Völkerkunde. 1,31.

15*) Peschei, Völkerkunde Ö45.

16) Pösche, The Aryans 64.

17) W. Tomaschek, Zeitschrift für die österr. Gymnasien. XXIX. 862.

18) Fligier, Kosmos. V. 216 and earlier in the Mittheilungen der Wiener anthropolog. Gesellschaft. VI. 217.

19) "La première patrie des Aryas était située vers le 49^e degré de latitude, aux environs du lac Balkach, et ils appartenait au type brachycéphale à cheveux bruns, dont le plus pur représentant actuel paraissent être les Savoyards et les Galtchas." Bull. de la Société d'anthropologie de Paris. 3. ser. II. 190. How far the latter opinion is justified will be explained later. Piëment is not the only one to subscribe to it, but most other French scholars also.

20) op. cit. 200.

Evident; c'est qu'une langue comme une race, ne se forme que dans une aire géographique distincte, parfaitement delimitée par des frontières infranchissables." *)

And indeed, one can think of nothing more absurd than to relocate the "original homeland of the Aryans to a region that has always been inhabited by peoples of the Mongolian race and is still inhabited today.

These facts alone must determine us to drop the assumption of the Asiatic origin of the Aryan tribe as an untenable one.

The geographical distribution of the Aryan peoples, the undoubted results of lexical research, which cannot be explained away by any art, speak against it. research, and finally, in a no less effective way, general linguistic-anthropological considerations. In addition, there is another equally important factor: historical analogy. For as far as historical knowledge goes, no Aryan people, with the exception of the Gypsies, has ever crossed the borders of Europe and settled there. All the peoples who penetrated from Asia into Europe belonged either to the Semitic or the Mongolian race. History, on the other hand, from the earliest times to the present, tells us of numerous military campaigns and emigrations which Aryan peoples* have undertaken and are still undertaking from Europe to Asia, a fact which, according to all the rules of induction, also permits us to draw conclusions as to the direction of the movements of peoples in prehistoric times.

²⁾ This also agrees with what Bastian, *Schöpfung oder Entstehung*. Jena 1875, p. 308, on the indirect influence of the geographical environment on the structure of languages: "Thought is dependent on the organism: this is dependent on the natural environment and thus the grammatical structure of languages is to a certain extent linked to the characteristics of the race." I will explain this sentence in more detail later in my remarks on the morphological character of Aryan languages.

This result of previous research into the original home of the Aryan tribe puts us in a position, when dealing with the question of which of the above-mentioned types - the Germanic-Scandinavian, the two Celtic, the Slavic, Iranian and Indian types - is to be regarded as the original and actually Aryan, to disregard completely the two last-mentioned types, which are considered to belong only to Asia. The whole question is thus reduced to the question of which of the four European types has the most justified right to be regarded as the original Aryan type. The fifth European type, which goes back to the fossil Cro-Magnon type and is still preserved in a less pure form on the Pyrenean peninsula, in Lower Italy and Sicily and in Greece, I believe, as already mentioned, that I can dispense with here because the peoples belonging to this type spoke non-Aryan languages as Iberians, Japygians, Sicilians and Pelasgians before their Romanization or Graecization and thus testify that they do not belong to the Aryan tribe. Identical to this type is one of the two Celtic types (the so-called Milesian), so that this too is of no further relevance to our question. As far as the

remaining three types are concerned, the Slavic and the second Celtic type can be united into one type, insofar as both types show a striking similarity in all the physical characteristics that are mainly considered in anthropological classification: in both we find brachycephalic skull shape, predominantly dark complexion and small stature.¹⁾ We can group them all the more into one type, as they are by no means spatially isolated, but are connected to each other by the dark brachycephals of Austria, Switzerland and southern Germany, who make up the majority of the population in these countries.

³⁾ In his characterization of these two types, Topinard, *L'anthropologie* 469, 474 gives a few more details which, when compared, also suggest that the two belong together and form an anthropological unit. At the international anthropological congress in Paris (1878), he himself emphasized the great similarity between certain Croatian skulls and those of Auvergne, where the brachycephalic Celtic type has been preserved most purely of all parts of France. The latitudinal index is almost identical for both tribes (84.07 for the Auvergne and 84.83 for the Croats according to Broca). Furthermore, Topinard has also

Which type is to be regarded as the Aryan archetype? The brachycephalic Celtic-Slavic or the dolichocephalic Germanic-Scandinavian? Before we answer this question, it will be good to decide another preliminary question that could perhaps be raised. Are the differences between the two types really so great that we must place them in opposition to each other, or is it perhaps possible to regard them as modifications, brought about in the course of time by the influence of climate, food and other external circumstances, of a basic type common to both? Do not the blond hair and blue eyes so frequently found among individual Slavic tribes speak in favor of this? Does not the fact that among the German people, where one should expect the Germanic-Scandinavian type to be most purely preserved, brachycephaly with dark complexion is found just as frequently as dolichocephaly with light complexion?

"

We must reject this assumption, which has actually been made by some anthropologists²⁾, for the following reasons. It is highly probable that Fr. Müller³⁾ fixed the year 3000 BC as the beginning of the separation of the Aryan tribes from the parent stock. He further noted that the likewise Celtic type of the Savoyards returned among the Slavs of the lower Danube. Similarly, H. v. Hölder (*Zusammenstellung der in Württemberg vorkommenden Schädelformen*. Stuttgart 1876, pp. 18, 34) emphasized that the inhabitants of Brittany are closest to the Slavic peoples in terms of the shape of their skulls, and that the Galenians also correspond to the Slavs in terms of the shape of their skulls. At the same time, however, he also showed that the so-called Sarmatian (Slavic) type was represented in large numbers in the population of Württemberg. And what is true of the population of Württemberg is, as will be shown later, even more true of the population of southern Germany as a whole, just as Huxley had earlier found that the Finnish and Slavic skulls resemble the Disentis and southern German skulls.

¹⁾ They are particularly common among the Poles, much rarer among the Ruthenians, as

can be seen from the "Tableau comparatif des caracteres physiques de la population de la Galicie" published by Majer and Kopernicki, where the ratio of the light type to the dark type is given as 182:100 for the Poles and 92:100 for the Ruthenians.

²⁾ Cf. Hölder's treatise: "Ueber die in Deutschland vorkommenden, von Herrn Virchow den Friesen zugesprochenen niederen Schädelformen" in Archiv für Anthropologie. XII. 315-358.

³⁾ Müller, Allgemeine Ethnographie 88. note.

There is not the slightest reason to move back. On the other hand, several examples provide striking proof that a period of 4000-5000 years, even if the place of residence has changed, is not sufficient to significantly modify the racial character once it has become established. "An striking example of the tenacity of the racial character", writes Fr. Müller,^x) "can be found in the Jews. In the paintings of the Italian and Dutch masters we find the same type that we encounter among this people today; indeed, even in the ancient Egyptian, Assyrian-Babylonian and ancient Persian monuments, which are now at least 4000 years old, the racial character, which particularly characterizes the Jew, cannot be mistaken for a moment. On the Persian and Assyrian-Babylonian monuments appears the type of the inhabitants of the Tigris-Euphrates plain, just as it is still found today among the unmixed population of these regions. The same flowing curly beard, the same almond-shaped eyes, the same peculiarly shaped strong nose. Similarly, despite his unprecedented migrations, the Gypsy still presents the Indian type in his peculiarly shaped face, elongated thighs and long, thin fingers. The Negro is a particularly instructive example. We find it depicted on the oldest Egyptian monuments with the same characteristic features as today. It is the same curly head, the same bulging, upturned lips, the same thick blunt nose. So the period of about 5000 years has not been able to reshape the Negro in any way that we can perceive." ^{21 22)}

Kollmann goes even further, claiming with regard to the European races that since the Diluvian neither climate nor other influences of the same have in any way changed the somatic characteristics, insofar as they are to be regarded as expressions of race. "If, nevertheless," he adds, "we observe that the characteristic contrasts of the races in the various ethnic regions are gradually weakening, this is due to the effect of

21¹⁾ Mrs. Müller, a. a. O. 60.

22) Pott (Die Ungleichheit menschlicher Racen. Lemgo und Detmold 1856, p. 30) on this question: "That climate and way of life are not without influence on the shaping of the racial character and thus of one of its main characteristics, the hair, cannot be denied; in any case, however, these unchangeable causes only exert any noticeable influence after a long period of time, and history, as far back as it goes, knows of no example of a dark-haired people having become blond or, conversely, of flowing loc ken having turned into Negro wool. The statement that the color and texture of the hair are related to the original racial characteristics says just about everything that ethnology has to say about these points.

the incessant interbreeding that has been taking place for thousands of years."²³) The blond hair and blue eyes of the Slavs therefore do not have the significance given to them by some anthropologists.

It follows from these considerations that it is not possible to present the Germanic-Scandinavian type, as it is still most purely represented today by the Swedes and Norwegians, as a type that only developed later after the separation of the Aryan tribes under the influence of the special climatic conditions of the north. The relatively short period of barely 3000 years that elapsed between the separation of the Aryan tribes and the appearance of the Germanic tribes, unanimously described by the ancient writers as blond and blue-eyed, would obviously not have sufficed for this. However, we also have positive evidence that long before the appearance of the Germanic tribes, peoples lived in Europe who had all the physical characteristics that we are accustomed to consider as belonging exclusively to the Germanic tribes. In the ancient Egyptian depictions of the monuments, the representative of the fourth race (the first race being the Egyptians, Assyrians and inhabitants of Arabia, the second the inhabitants of Palestine, the third the Negroes) is a white-colored man who bears the name Tamhu, which means "man of the northern world". With regard to this fourth race of white-colored

Brugsch-Bey,^x) now explains to people that the traces of an immigration that must have taken place from Europe to the Libyan coast of Africa in the first half of the third millennium BC have been proven in the most definite way. "I can assert this immigration with such certainty because the monuments are full proof of it." At the end of his remarks, he points to the well-known fact that even among today's descendants of the ancient Libyans there are many specimens with blond or reddish hair and blue eyes, just as the depictions of the monuments show us, and concludes from this that an immigration from north to south took place and that therefore in a historically limited time the transfer of a whole race of people from north to south across the sea took place. The Egyptian annals also tell us that a Nordic people with blond hair, blue eyes and white skin appeared on the western borders of Egypt under King Menophta around the year 1500 BC. We even find that Egyptian kings entered into marriages with women of this white-colored race of the north. Queen Nicotris of Manethes, who belonged to the VI dynasty, is depicted as having blond hair, and even today's fellahs tell of a ghostly figure who transformed the third pyramid every night as

23knows." It is important to note this aspect of the permanence of racial characteristics because in recent times, under the influence of Darwinian ideas, some renowned ethnologists, above all Peschei, have expressed the view that the change in such characteristics takes place in a relatively short time (P e s c h e i, Völkerkunde 93). It is easy to show that the interpretation given to certain facts, such as the fact that today's French are predominantly not blond, while the ancient Gauls are consistently described as blond, is a false one.

*) Mittheilungen der Wiener anthropol. Society. XI. 7.

a white woman. The pyramid of the XVIII. Dynasty (1700 years B.C.) was the mother of King Amenhotep IV, as we can see from the preserved picture, blonde, with blue eyes and a rosy complexion,

What is true of the color of the hair, eyes and skin is also true of the shape of the skull. Nothing entitles us to regard the various forms of skull as exhibited by the Aryan peoples as modifications of a basic type brought about by external conditions since the time of the separation, which would have disappeared without a trace. If we also disregard the comparative brevity of the period, there would be no evidence anywhere of those special influences in Central and Northern Europe* which should have brought about those profound changes which either the Brachy-

*) Verhandlungen der XI. allgemeinen Versammlung der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte zu Berlin im Jahr 1880, p. 135.

P e n k a, Origines Ariacae.

cephaly would have led to dolichocephaly or, conversely, from dolichocephaly to brachycephaly. However, it is impossible to assume that the Aryans would have been a tribe already strongly mixed with allophilic elements, i.e. no longer homogeneous, before their separation, because then the individual Aryan peoples of both Europe and Asia would certainly show a greater similarity in their physical characteristics and a more uniform character in their external appearance.

All these facts and considerations lead to the irrefutable conclusion that either only the peoples of the Slavic-Celtic or those of the Germanic-Scandinavian type can be regarded as the direct physical descendants of the ancient Aryans. If this is the case, it follows by itself that either the one or the other speak the Aryan language as a language originally foreign to them, or, in other words, that they were Aryanized at some time and can therefore only be regarded as Aryans in the ethnic, not also in the anthropological sense.

Numerous examples can be cited from the past and the present of entire peoples giving up their own language and adopting the language of a foreign people. This usually occurs in the case of the conquest of a country, where the subjugated population then adopts the language of their conquerors either voluntarily or by force. The reverse is very rare. Waitz cites a large number of such cases among primitive peoples; other examples are given by Hovelacque^{24 25}). I will confine myself to highlighting a few cases from the works of both and from my own notes.

Thus the Bosnian soldiers sent by Sultan Selim in 1420, several hundred in number, established themselves as masters in Lower Nubia, but did not preserve their language. The Chinese speak only Malay in many parts of Borneo. The small tribe of the

24) Waitz-Gerland, Anthropologie der Naturvölker. I. Leipzig 1877, p. 285.

25) Hovelacque, La linguistique, 419.

Brothertons (Algonquins - Indians) have adopted English, the Negroes in Haiti French, just as the Negroes in America speak the languages of their masters everywhere: in Brazil Portuguese, in Mauritius French, in the English West Indies and in Sierra Leone the well-known broken Negro-English, which is also found in Surinam alongside Negro-Portuguese or the so-called Jewish* language, in the Danish colonies a language whose words are mostly Low German with all inflectional syllables omitted. In America, too, Spanish has repeatedly replaced the indigenous languages. The Indians in the vicinity of Rio Janeiro have also almost completely lost their language and speak Portuguese.^x) In western Africa, namely in Guinea, Kaffir idioms are spoken by actual Negroes. The Papuans have also adopted Malayo-Polynesian idioms on many islands of the Great Ocean. Asia Minor was first Hellenized, later Turkicized, as was a part of Asia and the entire northern edge of Africa. It is known that the old Prussians and the Slavs on the Elbe and Saale have been Germanized, and that the Sorbs in Lusatia are threatened by the same fate. The Finnish languages are losing more and more ground to the Latvian and Russian languages, and all of the Curonians and almost all of the Livonians have already been Germanized. The same applies to the Celtic dialects in relation to English, and to Basque in relation to Spanish and French. It is no less well known that English is spreading more and more in North America at the expense of the other European languages. The greatest example from the historical period of the history of peoples, however, is the spread of Latin over the whole of Italy and Sicily, over the territory of ancient Rhaetia, over the Pyrenean peninsula, over ancient Gaul and Dacia, a case which would be unique in the history of linguistic conquests if it could not be proved that long before the existence of the Roman Empire, Aryan had spread over even more countries and peoples, not only in Europe but also in Asia.

Now, were those who spoke this language in the true sense of the word as the language of their fathers, blond, blue-eyed, dolichocephalic and of tall stature or dark-haired, dark-eyed, brachycephalic and short? I already indicated earlier that the loss of

¹⁾ Sayce, Introduction to the Science of language, I. 219 gives in a separate appendix, together with information on the grammatical literature, some samples of these and other idioms which he calls mixed jargons and which are not without interest from a linguistic point of view.

2* of one's own language is usually a consequence of the fact that a people enters into a relationship of political and social dependence with another people by way of military or peaceful conquest, which then has a natural interest in the subjugated people giving up their language and adopting the language of their masters^x). The cases where the opposite has occurred, namely where the masters have adopted the language of their subjects, are very rare and form the exception (the aforementioned Bosnian soldiers in Lower Nubia, the Normans and Burgundians in France, the Lombards in

Italy, the Bulgarians on the lower Danube)" Accordingly, we must also assume in our case that the conquest preceded the invasion and we can expect that there would still be signs from which we could determine who was the victor and who was the vanquished. These characteristics can indeed still be found, and in greater abundance than one would have expected in advance, and show beyond doubt that the conquering people, i.e. the Aryans, were blond, blue-eyed, dolichocephalic and of tall stature, and that the Germanic-Scandinavian type should therefore be regarded as the true Aryan type.

For even today we find that this type is far more numerous among the higher classes, i.e. the descendants of the conquerors, than the dark brachycephalic type. His ²) already drew attention to the fact that even now tribal differences coincide with differences in head formation, e.g. that the Hochberg form (i.e. the so-called Germanic skull form of H. von Hölder) is a predominantly aristocratic form. His initially only had Switzerland in mind here; however, the same also applies to Germany. Already in his "Beiträgen zur Ethnographie von Württemberg)" ^{3u} H. v.

¹) Whitney, *Leben und Wachsthum der Sprache*, 289 remarks on this: "State supremacy, social superiority, higher education are the main causes that bring about language exchange, or rather, they are the leading circumstances that decide in a mixture of peoples which part of the population should give its language largely or entirely to the new ethnic community. If there were no mixtures of this kind, there would at least be hardly any interchange of language; borrowing would also take place in this way, but no abandonment of one language for another."

²) *Archive for Anthropology*. I. 70.

³) *Archive for Anthropology*. II. oil.

Hölder stated that there were more Germanic forms among the nobility and the propertied bourgeois classes of this country than among the craftsmen and day laborers, but at the same time showed that the element he called Ligurian at the time (brachycephalic and of dark complexion) had been increasing more and more in the middle and higher classes since the beginning of the Middle Ages. He also commented on this question in his "Zusammenstellung der in Württemberg vorkommenden Schädelformen" on page 15: "Anyone can easily convince themselves that, in general, brachycephalic skull shapes are the most common among the lower classes of people throughout the country. The propertied, higher classes, including the older nobility, are much closer to the unmixed Germanic type than those. This is very natural. For among the nobility and the higher middle classes are to be found most of the descendants of the lords of the land, the Alemanni." Pösche even claims that even today there are almost no dark ones among the German nobility; that in France, Italy and Spain there are still more Procente Heller among the nobility than among the rest of the people.) ²⁶

That this is indeed the case in France is also confirmed elsewhere. Durand²⁷) remarks in a separate essay dealing with the ethnographic conditions of the Aveyron department from this point of view: "Il existe jusqu'à présent, dans l'Aveyron un grand nombre de familles de vieille souche nobiliaire; chez toutes elles prédomine un type spécial caractérisé par une chevelure blonde, des yeux bleus, une carnation blanche, un teint coloré et des formes sveltes associées à une taille au-dessus de la moyenne. Or, tandis que tous ces vieux nobles sont blonds, à peu près sans exception, la population aveyronnaise, dans son ensemble, n'offre que deux blonds sur quinze individus. Cette opposition de type dénonce incontestablement une différence de race correspondante."²⁸ This testimony is all the more valuable as, in France in particular, there are many efforts to stamp the brachycephalic element as the genuine Aryan element.

England, Scotland and Ireland show the same picture. Pinkerton²⁹) claims that the Celts living there, especially

27) Bull. de la Société d'anthropologie de Paris. 3. ser. II. 424.
28) 1814, p. 26, 37, 339.

29) Pinkerton, An enquiry into the history of Scotland, new ed. I. Edinburgh,

those in the Scottish Highlands, are usually small, "with brown faces and complexions, with black curled hair and dark eyes", whereas almost only the higher classes have a Norwegian appearance: "fair faces and red or light hair".

But this assumption is also confirmed by the testimonies of ancient writers, various types of artwork and finds in ancient graves. In Rigsmäl, the origin of the three classes of the ancient population of Scandinavia is recounted and the physical characteristics of each class are described. The unfree appear as people with dark skin and repulsive features. According to Simrock's translation, the relevant passages read:)^x

7. "Edda nourished, the child was nourished,
Because black of skin is called Thräl
8. It began to grow and flourish.
The Rangen's fur was rough on his hands,
The joints are nodular (from cartilage tumor),
Fingers bold, face chapped,
The back is crooked, the heels protruding.
10. Then the goose-legged one came into the den,
Flocks on the hollow foot, arms sunburnt,
Pressed the nose Thyr the harlot.
13. 5. from them sprang the generation of the servants."

The freemen (peasants), on the other hand, are portrayed as men with trimmed beards and free foreheads. The poet describes the nobles in more detail, emphasizing in particular their white skin color, their blond

hair and her sharp eye ; emerge.

26. "In the veil she sat a supple breast on the blue

The train flowing The robe;

brow shining, lights the The chest whiter than shining snow.

neck ; 31. The mother gave birth and

gave birth in silk

A child who was netted and called Jarl.

The curl was light and the cheek glowing,

Eyes as sharp as snakes."

The fact that blond hair was considered a sign of noble origin is also shown by the custom of the Germanic tribes and Gauls to paint their hair red.

) Simrock, Die Edda. Stutgart 1878, p. 112. In Anglo-Saxon the nobles, freemen and unfree are called eorlas, ceorlas, thraelas.

which, as Pliny^x) expressly notes, was done less by women than by men, proof that this custom was by no means based on female vanity and a desire to please. For the same reason, the miniature painters of the Middle Ages only depicted the nobility, knights and great men of the land with gold-colored hair, while, conversely, the servants and peasants were depicted with flat noses, large mouths, thick black hair and small physiques. The fact that Germanic tribes and Gauls compressed the heads of their children can be explained in the same way; this was obviously only done in order to maintain the length characteristic of their race. According to Bodin³⁰), the French also used to consider long faces to be the more beautiful (*oblongas formiosiores esse*).

We know from Cato the Elder³¹) that he had red hair and blue eyes, and Sulla³²) also testifies that he was very blond. Ovid⁶) ascribes snow-white skin and blond hair to Lucretia, apparently in view of her noble origins and because they were considered beautiful, and this in turn probably only because they were characteristic of the noble classes. This assumption also explains the custom of dyeing one's hair blonde, which was common among the Greeks and Romans and was also practiced early on by men, just as blonde hair is still considered the most beautiful in Greece today. In Greek antiquity, however, it seems to have been considered an indispensable attribute of ideal youthful beauty, as can be seen in many passages from Greek poets. Blonde (*savftoc*) is the usual attribute of Menelaus in Homer, also of Meleagros and Rhadamanthys, of Demeter and Agamede; Hesiod uses it of Ariadne and Joleia, Pindar of Athena and the Charites, also of Achilles, Euripides of Harmonia. Homer also uses *xopn*) for Achilles and *Javöat Tpi/ss* for Odysseus. The eternally youthful Apollo is also blond, and blond hair ornaments remained the traditional characteristic on the Attic stage,

Signs of noble-born heroic youths. In addition, there is the testimony of Adamantios², a Jewish physician from the 5th century AD, who used the lost physiognomic work of Polemon, who lived several centuries earlier, for his work. According to this work, men of pure Hellenic race are *|xs?akot, sopüTspot, op&iot,*

ΤΤΙV ypoav, Savftot, wear

i.e. all physical characteristics as we must ascribe them to the unmixed Aryans. ³)

It has been objected to the assumption that the Aryans were originally blond that the law of Manus (IV. 130) forbids any Brahmin to walk across the shadow of a person with red hair and that the same law (III. 8) forbids men of the three upper castes to marry a girl with reddish hair. This objection is self-refuting,

30^y) Pliny, *Hist. nat.* XXVIII. 51.

*) Bodin in Rogetde-Belloquet, *Ethnogenie gauloise*. II. Paris 1875, p. 89.

31⁸) *P lut ar eh*, Cato M. 1.

32) Plutarch, Sulla 2.

33) Ovid, *Fasti* II. 763. .

because the reference here is to red and not blond hair. Red hair was undoubtedly considered a sign of mixed origin and the law was probably pursuing no other aim with this prohibition than to prevent the purity of the Aryan tribe being threatened by such mixed blood. And the fact that the Aryans in India were also of white skin color, blond, blue-eyed and of tall stature is further proof of this.

¹⁾ Cf. Pas so w, Handwörterbuch der griechischen Sprache at

²⁾ Adamantios, Physiogn. II. 24.

³⁾ Among the modern Greeks, the Sphakians on the island of Crete, descended from the Dorians, seem to have preserved the Aryan type most purely. They are distinguished by their tall stature, proud gait and, according to the testimony of the Austrian Consul General Hahn, almost all of them have blue eyes, blond hair and a blooming complexion, whereas the other Cretans are predominantly brown in color. They inhabit the almost inaccessible slopes of the White Mountains and owe the preservation of their Hellenic-Aryan character to this circumstance, just as in ancient times the Dorians distinguished themselves from the other Greek tribes, especially from the Jonians, by the purity of their blood. These Sphakians as well as the works of sculpture that have survived from antiquity, especially from the heyday of Greek art, show irrefutably that the Germanic-Scandinavian type is to be regarded as the true Aryan type and. In this respect, a comparison of the ancient Greek ideal figures with the oldest sculptural representations of Teutons and Germanines (Colonna Antonina in Rome, the triumphal statue of Thusnelda in Florence, the bust of Arminius in Rome, the marble bust of a Teuton in the Hermitage in St. Petersburg, etc.) is of particular interest. Only the single bust of Socrates shows a distinctly brachycephalic type.

today - even if we disregard today's Brahmins, who are also lighter in color than the lower classes of India - the strange people of the Kafirs or Siaposh (i.e. the black-clad) in Kafiristan in the northeast of Kabul, who, according to Trumpp, were driven there from India in the 8th and 9th centuries of our era by the PaStö tribes advancing from the southwest to the north. Elphinstone, who visited these regions in 1810, already emphasized the white color of their skin and the close relationship of their language to Sanskrit. Burnes, who saw them later, describes them as people of tall stature, of very white skin color, with blue eyes, strongly developed eyebrow arches and features of Greek regularity. Blonde hair is said to be common. He notes that they are as different from the Afghans as they are from the inhabitants of Kashmir. The two Afghan missionaries Fazl-Ilaqq and Nur-Ullah, who traveled the country at great risk in 1864 and whose observations were published by Trumpp²), also speak of the very white skin color and extraordinary beauty of their women, and what is perhaps even more important, they mention traits from the life and customs of the Kafirs that are surprisingly reminiscent of the description that Tacitus draws of the customs of the ancient Germanic tribes. Likewise, E. Schlagintweit²) that the Kafirs are conspicuous for their tall, well-educated figure, regular face and lighter complexion than their neighbors. However, both the latter and the Afghan missionaries speak only of brown

hair and brown eyes, which does not, however, diminish the ethnological significance of their other statements about the somatic constitution of the Kafirs. And these are all the more noteworthy as the language of this people has been unanimously recognized as Sanskrit by men such as Ritter, Bopp, Humboldt, Prichard and Trumpp.

Finds in old graves also confirm the assumption that the ancient Aryans were dolichocephalic and that the shape of their skulls is identical with the skull shape called Germanic by H. von Hölder (Ecker's serial grave shape). Most remarkable in this respect are the results that emerged from the opening of the cemetery near the village of Alexandropol in the Ekaterinoslav governorate, 60 - 70 versts from the village.

¹⁾ Journal of the German Oriental Society. XX. 377.

^{a)} Globus. XXXV. 233.

from the right bank of the Dnieper. It will be shown later that the formation of the Slavs took place in this part of Russia, namely in the river basins of the Dnieper, Bug and Dniester. Here the Aryans, who came from the north, subdued the formerly nomadic Scythians and forced them to adopt a settled way of life and permanent settlement and to adopt the language of their conquerors. It can therefore come as no surprise to us that long and short skulls were found in this burial mound. And indeed, 2 long and very narrow and 3 short and broad skulls were found there. It is interesting to note the way in which the famous K. E. von Baer, in his posthumous treatise published by Stieda: "Beschreibung der Schädel, welche aus dem Grabhügel eines skythischen Königs ausgegraben worden worden", comments on the relationship of these skulls to one another (p. 228): "It is not to be doubted that the two elongated heads did not belong to the same people as the short and broad ones, for no people is known of which some individuals had long narrow heads and others short broad heads. It is also highly probable that the short and broad heads belonged to the Scythians and not the long ones. First of all, there are more of them, and they are all male, while among the long ones there is only one male head and one female, undoubtedly the king's bedmate. Finally, everything that the history of the Scythians has preserved for us is more in keeping with the customs of such contemporary peoples, who are characterized by short heads." We know from Herodotus that at the funeral of a Scythian king, several of his servants and his concubine were sacrificed. It follows from this that the elongated skull belonged to the king, but that this king was not of the same race as his subjects, from whom he had taken his servants. As far as the question of which people or race the king may have belonged to is concerned, Ecker pointed out in a redaction note that the description Baer gives of this skull is often reminiscent of its serial burial form, and that Baer had already mentioned it during a visit he made in

*) Archiv für Anthropologie. X. 215.

Ecker, found a great similarity between it and the Byzantine burial skulls *), so that there can be no doubt that we can recognize genuine Aryan skulls in the two elongated skulls. At the same time, however, it is also clear that the Aryans were the rulers and the brachycephalic population the subjects in ancient Scythia.

If the Brachycephali are the subjugated and the Dolichocephali the conquerors and masters, we may expect to find in the territory of the former traces of that activity by which the dominion of one people over another, if it is to be of longer duration, must be absolutely secured, while on the other hand it will not be at all conspicuous if in the territory of the latter no such works serving to secure the dominion (fortified towns, castles, redoubts, etc.) are found. If, according to Pott³⁴ ³⁵), the language of a conquering people has to be protected from destruction by the construction of larger cities, this applies even more to the maintenance of the rule itself. In fact, we find such cities and other bases of political power in the realm of the Aryan peoples wherever the brachycephalic type occurs alongside the dolichocephalic type. Thus Caesar found a large number of fortified places in Gaul and Britain - the main areas of the Celtic type - which made the conquest of these countries considerably more difficult, but which were not originally designed against the Romans, but are to be regarded as the main bases of Aryan-Gallic rule over the subjugated dark indigenous population of the country (the Celts). Likewise, the Dnieper region, where we are most likely to place the original seat of the Slavs, shows an extraordinary number of fortified sites. "Perhaps no country (like southern Russia)," writes the well-known prehistorian Dr. Wankel in his "Sketches from Kiev"^{36 37 38}), "will have as many tumuli and graves as this one; none so many Gorodischts (Hradischtsö, prehistoric settlements and fortified places

34. *) Archive for Anthropology. XI. 173.

35) Pott in the article: "Indogerman. Sprachstamm" 81 in Ersch und Gru- ber's Encyclopädie:

"If colonies are to be able to suppress languages or even substantially transform them, they must have a permanent power to do so.

36 and this power must be able to lean on important cities as its center, otherwise they will go with the language irredeemably in the mass itself

37 of the peoples subjugated by them for a time."

38) Mittheilungen der Wiener anthropol. Society. V. 5.

39q These villages are located on hills or steep slopes, which is explained by their original purpose. This also explains the striking phenomenon that in most of Europe (southern Germany, Switzerland, France, England, Italy, Russia) the oldest settlements are not found in the fertile plain, but on higher points (isolated mountains, steep edges of plateaus), often on completely infertile soil. Cf. the evidence of Ferd. Freiherr v. Andrian in the Mittheilungen der Wiener anthropolog. Gesellschaft. VI. 19"

)); if you travel through the country on the railroads, you will see a large number of kurgans (tumulus graves) crisscrossing it. To get an idea of the great wealth of objects to be explored, it will suffice to say that in a stretch of land 252 versts from Kiev, along the Dnieper at a distance of one hour from its banks to Solotonosha, there are 1690 kurgans, 36 gorodishts or hradishts and cave dwellings hollowed out in loess in eight places." Such remnants of a distant past are also widespread to the same extent on the other rivers of southern Russia.⁴⁰) In contrast, there is the very significant and only now quite understandable report by Tacitus^{41 42}) about Germany, the center of radiation of the blond dolichocephali: "Nullas Germanorum populus urbes habitari satis notum est, ne pati quidem inter se iunctas sedes. This is followed by the no less significant message: "colunt discreti ac diversi, ut fons, ut campus, ut nemus placuit, vicos locant non in nostrum morem conexas et cohaerentibus aedificiis: suam quisque domum spatio circumdat", a passage that will find its full explanation in my later discussions on the origin of the Slavic village community.

No less important for the decision of our question is the result to which the comparison of the sounds of the currently spoken Romance and Slavic languages on the one hand and the Germanic languages on the other leads. It is universally assumed *) that the basic Aryan language already possessed mediaaspiratae (gh, dh, bh); I myself will later prove that the pure tenues (k, t, p) of the same were unknown, that it only possessed the tenues aspiratae (kh, th, ph) and that the assumption that the latter only arose later - during the special life of the individual languages (Sanskrit, Zend, Greek) - is completely unfounded. For the time being, I refer to Kräuter's excellent comments on this question^x). However, neither the Romance languages, insofar as they are spoken by brachycephalic Romans (French, northern Italians), nor any Slavic language know aspirated closing sounds, but only the Germanic languages in central and northern Europe have them at present, in particular - which should be noted - the North Germanic languages, which is immediately noticed when Slavs or Romans speak German. Kempelen^{43 44}) already noted that "the German simple k before a proper vowel reads like kh in the larger part of Germany: in Kind, Kunst like Khind, Khunst." The same

40) Tacitus, Germ. 16. Names such as Asciburgium can in no way mislead us as to the accuracy of this message; cf. Schweizer-Sidler in his edition of Germania. Halle 1871, p. 32.

41) Samokvasov examined 160 of them in the Chernigov Governorate, 60 in the Kursk Governorate and 50 in the Tula Governorate.

42) Schleicher, Compendium der vergleichenden Grammatik der indogermanischen Sprachen. Weimar 1871, p. 10.

43¹) Kräuter, Zur Lautverschiebung. Strassbourg 1877, p. 151.

44) Kempelen, Mechanismus der menschlichen Sprache. Vienna 1791, p. 185.

observation was made by R. von Raumer⁴⁵): "Behind every hard muta we speak the vocal with a sharp breath. Just as we say: 'aben (hāben), we also speak t'ag (tag). Indeed, it is absolutely impossible to produce any hard mute sound without the same pressure of the atlām that we denote by h." Brücke⁴⁶) comments on this as follows: "We Germans almost always aspirate the tenuis before vowels, albeit only weakly, so that our accustomed ear does not even notice it; but it becomes immediately apparent to us when we hear the pure tenues that the Slavs tend to form when speaking German." Scherer⁴⁷) treats the New High German tenues as aspirates in the sound-historical part of his work on the history of the German language. Sievers⁴⁸) notes that in northern Germany the signs k, t, p are usually given the sound of tenues aspiratae. Kräuter has a similar opinion.)⁴⁹

45) R. v. Raumer, Die Aspiration und die Lautverschiebung. Leipzig 1837, p. 19.

46) Brücke, Die Grundzüge der Physiologie und Systematik der Sprachlaute. Vienna 1856, p. 58.

47) Scherer, Zur Geschichte der deutschen Sprache. Berlin 1878, p. 119.

48) Sievers, Grundzüge der Lautphysiologie. Leipzig 1876, p. 83.

49) Kräuter, op. cit. 18.

It follows from this that neither the brachycephalic Romans nor the brachycephalic Slavs, who know neither *tenues* nor *mediae aspiratae*, but only the unmixed Germanic peoples are the true descendants of the Aryans. For these possess both the one and the other group of sounds, which are characteristically absent within the Germanic language family only where the brachycephals are either exclusively represented or make up the majority of the population, as is the case in southern Germany and partly also in central Germany.

L. Geiger was the first to recognize that the blond hair, the blue eye and the light skin color form the actual Aryan type. "The peculiar light type, the color combination of blond hair and blue eyes," he writes,^x) "is essentially restricted to Indo-European peoples. In the north, neighboring Finnish peoples take some part in this originality, moreover it is not found at all; in the south it is lost, here more, there less, even among the Indo-Germanic peoples. How are we to explain this relationship? If the hair and eyes of the Hindus have become black, and even the color of their skin yellowish, this can hardly be explained otherwise than by the mixture with the aborigines of India. Something similar is at least possible wherever we find dark Indo-Europeans. But since, as far as we know, there has never been a non-Indo-European people from whom the northern Indo-Europeans could have adopted the light color, we are certainly more justified from an ethnological point of view in considering the light character everywhere we find it to be the unmixed Indo-European type. This alone suggests that the Indo-Europeans have remained most unmixed where the blond type is most pure; and it is well known how much the Romans noticed this in the Germanic peoples. It is hardly too much to conclude that the people who have preserved the original type most purely and have had the least contact with tribal peoples are also the most likely to be autochthonous." This argument by the brilliant Geiger certainly leaves nothing to be desired in terms of logical acuity.

^j) L. Geiger, *Zur Entwicklungsgeschichte der Menschheit* 120.

The same idea was expressed a few years later (1876) by H. von Hölder⁵⁰). "At the time of Roman rule, the Germanic peoples were only the only unmixed Aryans in Europe; all other nations included a larger number of allophylic elements. The Gauls are still today, as they certainly have been for thousands of years, as far removed from the Germanic type as the Slavs, with whom they agree in the shape of their skulls. A large proportion of the Spanish, French, Italians, Bohemians and Poles have as much Germanic blood in their veins as the inhabitants of many parts of Germany. The Germanic elements, however, become rarer the further east one moves away from the present German border, and the last foothills of the Indo-Germanic peoples in Persia and India are, it seems, separated from their European tribesmen by a wide gulf." And finally, he remarks on the German people of the present day: "The German people, as it has developed since the migration of peoples, resembles a great ruin of a people, whose disintegrated parts have been brought back into a homely state with building blocks of a foreign kind." Hölder leaves undiscussed the causes of this decline of the Germanic-Aryan element in Germany.

After these men and, it seems, independently of them, Pöschle arrived at the same results and set them down in his own work⁵¹). In this work, he was the first of all ethnologists to assume a separate blond race, and he presented the Aryan-speaking blond peoples as peoples of this race, but declared those peoples who speak an Aryan language and are not blond or are blond and do not speak an Aryan language to be mixed peoples. He also succeeded in making this view very plausible, but the same cannot be said of his other assumptions, especially not of his attempt to explain the origin of the blond race and determine its original homeland, nor of his specific remarks about the individual Aryan peoples and their composition. His assumption of a separate blond race and the identification of the same with the original Aryans is all the more significant because two of the most important representatives of German science, the old master of German craniology - Ecker - and the old master of German archaeology - Lindenschmit - have expressed their agreement with it in a decisive manner.

Thus the former writes in his critical review^{52 53}) about this work: "I consider it particularly commendable that the author in the second chapter - for the first time - presents the blond-haired, blue-eyed, dolichocephalic tribe as a special, well-characterized human tribe (a good species), whereas up to now it has always been lumped together with black brachycephalics for the sake of the Indo-

50) R. v. Hölder, Zusammenstellung der in Württemberg vorkommenden Schädelformen 24.

51) Pöschle, The Aryans. Jena 1878.

52) Archiv für Anthropologie. XI. 366.

53) Lindenschmit, Handbuch der deutschen Alterthumskunde. I. Theil, 1. delivery. Brunswick 1880, p. 9.

European language tribe. In fact, blond hair and blue eyes are such exquisite characters, and the dolichocephalic row grave skull is a well-characterized skull form like few others, that one is well justified in calling this type a "good species" and separating it from all others."

It is also worth noting what Ecker remarks in the same paper about the significance of language for ethnological classification on the one hand and the question of racial mixing on the other (p. 368). "I, at least, am quite decidedly of the opinion that - as in the case of an individual, so also in the case of a people - language permits a conclusion to be drawn only as to education, but not as to descent¹ ." "The races are now so mixed that representatives of them," as Lewis remarked at the last meeting of the British Association in Dublin, "are to be found not only in most European nations, but even in the same family and among the children of the same parents."

Lindenschmit's comments^x) on our question are no less instructive and interesting. First, he emphasizes the necessity of paying due attention to physical characteristics when classifying peoples. "Only the comparison of languages has been considered, but the examination of an equally important characteristic of kinship, that of physical formation, has been treated with conspicuous negligence, almost ignored, so to speak.

But just as the body forms the first condition of human existence, so also the character of its structure and its development determines an essential part of the character of the individual as well as of whole peoples, and must therefore be regarded as an essential basis of the peculiarity of peoples, according to their generally uniform reproduction and their independence from the absorption of foreign religion, language and culture, as it was already regarded in the earliest times as a mark of their distinction."'

He then remarks further on p. 15: "The original type of the latter (the white peoples of the Occident), however, we find in no other place on earth preserved in the same perfection as in that ancient tribe of peoples of our part of the world (the Germanic), whose vocabulary and word formation still today offer the same relationships to the monuments of Sanskrit and Zend, which are also recognizable in the long-dead languages of the ancient European peoples, whose constant mixing had to change the peculiarity of their body formation in early times."

"Even if we see the type of the same in a purity as thousands of years ago only preserved in some parts of Germany, England and Scandinavia, this ancient tribe still possesses the power of expansion to spread the stream of its people over two parts of the world unknown to the ancients, as it poured out over Europe to Africa at the time of the migration of peoples and thus may have flooded deep* into Asia and over the north coast of Africa in the remotest time."

"So little do the linguistically related peoples of Asia show a life span and

vitality of equally lasting indestructibility that in the question of where the most powerful, oldest and deepest roots of the common stock are to be sought, the weight of the facts must necessarily decide in favor of the western part of the world."

"We attach no further significance to these results than the fact that they provide a more natural and unforced and therefore more probable explanation of the oldest relationships, which does not contradict the indications of tradition, the traditions of history or the evidence of the oldest cultural beginnings of the West."

Penka, Origines Ariacae.

A further confirmation of the assumption that we have to see the specific Aryan type in the Germanic-Scandinavian type results from the etymology of the name Aryan, sanskr. Arja, zend. Airja, Old Pers. Arija. It is known that this name was the national and honorific name of the Brahmanic Indians and the Iranians (Medes, Persians). It has been given many different interpretations. I will first mention Lassen's completely untenable explanation^x): "The word must come from the root r gehen - but also compare rta wahr, verehrt - only the derivation of the term is uncertain; probably Arja actually means: the one to be visited, as akārja is the name of the teacher of going there". Pictet²) traces it back to the same root ar (sansk. r, zend. ere), but takes it in the meaning of movement in general, especially upward movement (to rise); according to him, Arja means the exalted, high, worthy and compares it with the sanskr. rta, zend. areta, erōta honored, famous and the name of the Persians 'Apratot' handed down by Heroäot. The forced nature of this explanation is obvious. More appealing at first glance is the interpretation given to the word by M. Müller. "This word arja with a long ä," he says in his lectures on the science of language³), "is to be derived from arja with a short a, and this name is given in later Sanskrit to a Vaiqa or member of the third caste. What is here called the third caste must originally have constituted the great majority of Brahmanical society, for all who were not soldiers or priests belonged to the Vaidas. We can therefore quite well understand how a name originally applied to the cultivators of the soil and the fathers of the house could be used for all Aryans."

Now why the house fathers were called arja is a question that would take us too far afield. I will only express the conviction that the etymology of the word arja leads us to a ploughman or tiller of the soil and that it is connected with the

¹) Lassen, Indische Alterthumskunde. I. Bonn 1847, p. 5.

²) P.ictet, Les origines Indo-Europeennes. I. Paris 1877, p. 39.

³) M. Müller, Lectures on the Science of Language. I. 204 of the German edition by Böttger. Leipzig 1866.

Root of arare connections The Aryans may have chosen this name for themselves

in contrast to the Nomandenracen, the Turanians, in whose original name Tura lies the "speed of a rider"⁴⁴

However, as I will show in the further course of these investigations, the Aryans named themselves in contrast to the Turanians; it was, however, another distinguishing factor that led to the choice of the name Arja. That M. Müller's explanation could not be correct follows from the fact that the name of the third caste, which undoubtedly got its name from its occupation, agriculture^{54 55}), could not possibly have been transferred to the first two castes as an honorary name, apart from the fact that the names themselves also differ in the quantity of the initial a. We know that this is not the case. About this we know that the ancient Gauls and Germanic tribes regarded field work as menial labor and left it to their servants.

It is clear that the name Arja is derived from a root ar; the question can only be what this root means. Now there is an Aryan root ar, al with the meaning radiate, flame, often extended by root determinatives (arg, ark, ard). I infer it from the following words, most of which are listed in various places in Fick's comparative dictionary²): sanskr. art, ark-ati strahlen, arg, riig-ate rösten; greek 7^sx-Twp flammend, Masc.Sonne; lat. ad-ol-eo,-ul-tum, -obere verbrennen, ad-ol-escere verbrennen intr., ard-6re brennen; ags. äl-an brennen trans, and intrans., äl-geveorc igniarius, in-äl-an, on-äl-an incendere, altn. eld-r gen. eld-s = as. eld = ags. äled fire, blaze. From the basic meaning radiate, flame, the meaning developed to be bright, be white, make bright, brighten: Greek dSpy-sor/jc and dp^~sv-vo-? making bright, dpy-atva) to be white; Latin arg-uo make bright, brighten up.

The same meaning of bright, white also appears in the following nouns and adjectives sanskr. arg-una light, bright, rag-ata bright, white, neuter silver, ar-uSa shining; zend. örez-ataSilver, arez-anb the bright day; Greek vjksx-Tpo-v a bright ore, apy-opo-;, apy-r^c, apy-o^o-c, dpy-6-s white, apy-epo-c white spot on the eye, ak-cpo-; white spot, ak-cpooc' ksoxooc Hesych., aXcptvia^ Xsoxy white poplar Hesych.; lat. arg-ila white clay, arg-entu-m, osk. arag-eto-m silver, al-bu-s, umbr. al-fu, sab. al-pu-s white; altir. äl-aim white, shiny, arg-et, irl. airg-ead, cymr. ar-ian, ar-iant, corn. arg-ans, arm. arch-ant silver. The same meaning also

54') This is all the less conceivable as the Vai^jas seem to have been closer to the Qüdras than to the first two castes. "As a caste he seems, forming the boundary between the twice born and Qüdra, to be on several occasions more nearly coupled with the latter than with the members of the dvija Orders". Hopkins, The mutual relations of the four castes according to the mänavadharma^ästram. Leipzig 1881, p. 104.

55) Fick, Vergleichendes Wörterbuch der indogermanischen Sprachen, I. Göttingen 1874, pp. 22, 274, 500. II. (1876) 307, 520, 711.

underlies the following nouns: lat. ol-or swan, altir. el-a swan; altsl. le-bedi swan; ags. yl-fete, altn. äl-ft, ahd. al-piz, al-biz, el-biz swan; lit. al-va-s, lett. al-wa, russ. ol-ovo tin; altsl. ol-ovo lead.

We now see from these words that there was a root ar, al with the meaning radiate, flame, that from this meaning the further meaning bright, white has developed in quite the same way as from the meaning of the root skand glow, flame (cf. candeo, incendo, candela) the meaning shining, shimmering, white has developed: sanskr. kand-ra-s shimmering, light-colored, masc. the moon god, moon, ^kand-ra shining, lat. cand-idu-s shining white. The same root also underlies the Greek blond. Can it be in the least doubtful after the above explanations that our name Ārja. is also based on the same root ar in the meaning bright, white? Is it not always the brilliant white skin color that appeared to old¹) and new writers as one of the most prominent physical characteristics of the unmixed Germanic tribes and Gauls? Is it not the lighter skin color that still today distinguishes the Brahmins of India from the other classes of the population?

The correctness of this interpretation of the name is also confirmed by direct testimony. As is well known, the caste is called

¹) Thus speaks Dionys. Per. (v. 285) of the Xeuxa <puXa of the Teutons; Procopius (Bell. Vand. I. 2) remarks of the Gothic peoples: Xevoxol ydp dzavrec Ta aw.uara aat Tas xtfpa; SavUof.

Of the Galatians in Asia Minor we learn from Livy XXXVIII. 21 that they were distinguished by candor corporum. Silius Italiens (Punica IV. 154) praises the la, cfea colla and (200) flavam caesariem, crinem auro certan- tem, candida membra of the Italic Galicians. And Ammian. Marcell. XV. 12 says: "Celsioris staturae et c an di di paene Galli sunt omnes." in Indian varna, i.e. color, *) a proof that the whole Indian caste division was based on the racial diversity of the peoples inhabiting India. Even before the Aryan immigration to India, there was another race outside the Dravidians, which is still preserved in the tribes of the Kanti, Singp'o, MiSmo and others, similar to the Siamese, Burmese, Japanese and Chinese.²) The population was thus divided into white, yellow and black according to the color of their skin. Now the use of the word varna in the Rig Veda, in contrast to the later post-Vedic period, where it means caste without regard to the difference in skin color, still reveals its original meaning in many cases.³) Such a passage is also Rgv. 268, 9, where ārja with varna in the accusative sing, are connected with each other: prārjam (pra + ārjam) vārnam āvat = he (Indra) promoted the Aryan color. That varna here denotes the color and not the caste results from the singular in which it stands, since otherwise, if varna meant caste, the dual or plural would have to stand; after all, there were two Aryan castes (that of the priests and that of the warriors). But if varna denotes color, then ārja can only be the name of one color. And so it is in fact, and accordingly ārja varna means in the passage quoted: the

white color and is understood to mean the first two castes, which were distinguished from the other castes of India by the white color of their skin. Grassmann therefore correctly translates these two words as "tribe of the Aryans." Similarly, Rgv. 130, 8. speaks of the "black skin" of the natives. Thus we now also understand correctly when, to designate all people, the Jüdras, who are undoubtedly named by their black skin color, are combined with the Aryans (whites and blacks).

^{x)} Concerning the etymology of varna, Curtius (Grundzüge der griech. Etymologie. Leipzig 1879, p. 114) remarks: "The language understands color as a covering, for as color is connected with cel- are, oc-cul-ere, so sanskr; vārṇa-s (color) with W. var cover, veil, Greek /pwpia with skin, also sankr. khavi-s (W, sku cover) means skin and color." The stem varna is also contained in the name of the powerful Gallic people of the Arverni, i.e. the "men of white color, of white skin".

²⁾ R. Hartmann, The Nigritians. I. 186.

³⁾ A. Ludwig, Die Mantraliteratur und das alte Indien. Prague 1879[^] p. 216.

The proof of an Aryan root ar, al with the meaning bright, white on the one hand and the identification of the original type of the Aryans on the other put us in a position to etymologically explain a number of people's names for which a satisfactory explanation could not be found until now. This explains the name Apiatoi (also contained in the name Arta-khsathrā = Artaxerxes), as the Persians were called according to Herodotus, the name of the Armenian people (Arm. Arman6an and Arm6nak), after which their country * was also named (Old Pers. Arminija, Assy. Armina, Greek 'Apsvta) and the name of the Ossetian people in the Caucasus neighboring the Armenians, the Iron, as they call themselves. All these names mean nothing other than white or* white men. Among the Kyrgyz we find the name Allmann, Ellmyo. in the plural. On German soil we encounter the name of the very warlike people of the Arii, mentioned by Tacitus^{56 57}) and the well-known name of the great people of the Alamanni (Latin Alamanni, Greek 'Akajivot), a name which, like that of the Armenians, means nothing other than white men. Very similar to Alamanni (basic form^x Ara-mani⁵⁸) is the famous name by which a part of the Italic Aryans are

56 Herod. VII. 61.

57) Tacitus, Germ. 43. There is no reason to read Harii with J. Grimm (Deutsche Rechtsalterthümer 292) at this point, even if some manuscripts offer this variant.

58) The name of the freemen (in contrast to the serfs) is closer to the basic form among the Longobards than in Italy: Arimanni, Aremanni, Armanni, insofar as the r is still preserved. In addition to these names, the name Germani also appears to designate the same class. The name Arimannia also belongs here, as the epitome of all the Arimans in the kingdom of the Longobards was called. The same word also has the meaning of property, free property. Incidentally, J. Möser and Savigny have already identified the Urarian Aremanni (from^x Aramani), which is preserved in the Longobard legal documents, with the name of the people

known: the name Romani, which undoubtedly goes back to^x Aramani, from which form it probably originated through the intermediate form^x Ramani. With regard to the assumption that the initial a has been dropped, I only recall the Latin *sumus* for^x *umus* and the numerous cases in Italian where toneless vocals have been dropped in the initial: *bottega* for *apotheca*, *Rimini* for *Arirainum*, *vescovo* for *episcopus*, *nemico* for *inimico* and others.^{x)} Similarly, the name Ramnes, which has the same meaning as Romani, goes back to a basic form^x *Arā-mānās*, which first became^x *Rāmānās*, then Ramnes with the drop of the middle a and the transition of the word into the i-declension. Ramnenses is further derived from this. With regard to the second part of the composites^x *Ara-manai* and^x *Ara-manas* (a-stem and consonantal stem), I recall *goth*, *mana* and *man* (man), which were also in use alongside each other. The name of the gypsies (*Römānes*, sing. *Roman*) also goes back to the same basic form^x *Arāmānās*.

We see that all these names are based on one and the same root *ar* (*al*) and that only the suffixes are different: in addition to the pure root form *ar*, we find the stems *ar-a*, *ar-ja* and *ar-ta*, apparently without any difference in meaning. If further proof of this were needed, it would be provided by the various secondary forms of the German word *Alruna*: *Aliorūna*, *Alirūna* and *Alarūna*^{59 60}), all of which go back to three basic forms: *al-rūna*,^x *alja-runā* and^x *ala-rūna*, i.e. to the same basic forms to which the above-mentioned names of peoples also go back: *ar* (*al*), *arja* and *ara* (*ala*).

As far as the meaning of the first part of *Al-rūna* is concerned, the original material meaning of the word appears in a figurative sense: bright, clear, true, wise, as it could easily develop from the basic material meaning of the white color. The two adjectives white and wise, witty relate to each other in the same way. One also remembers connections such as: a clear thought, a bright head, a bright representation. The second part *rūna* is not, as is usually assumed, the Gothic *rūna* the

Alamanni, and Savigny has pointed to the *Halbannum*, which occurs alongside *Harbannum*, as proof of the transition from *r* to *l*. Cf. Savigny, *Geschichte des römischen Rechts im Mittelalter*. I. Heidelberg 1834, pp. 192 to 232. The original *r* has also been preserved in the name *Irman*, *Irmin* (*irmansül*, *irmsinsül*) from^x *Arman*, under which name, in my opinion, the ancient Germanic tribes worshipped their progenitor. Cf. on this J. Grimm, *Deutsche Mythologie*. I. 97, 293.

59^{l)} Diez, *Grammatik der romanischen Sprachen*. I. Bonn 1870, p. 174.

60) This also includes the name *Albrūna* mentioned by Tacitus, Germ. 8, which is still remarkable because the first part of the same (*alb*) is identical with the Greek, *dXods*, Latin *albus*, Umbr. *alfu*, sab. *alpus* weiss (basic form^x *al-pa-s*) and according to the whole context of the passage it can be assumed that the original appellative meaning of the same was the same as of *Alrūna*, *Alarūna* etc.. The stems *ara* and *arja* can therefore be equated with the stem *alpha* in terms of meaning, which is important insofar as the meaning of the latter (white) is undoubtedly established.

secret, but the *rūna confabulatrix* (formed from the root *ru tōnen*), which Fick *) has proven to be present in Old Norse, so that the whole compound, literally translated, means nothing other than our ND. soothsayer, with which one can also appropriately compare the verbs *weissagen*, *hellsehen*.

It was noted earlier that the Old Pers. The old Persian name *Arta-'khsathrā* is divided into *Arta* and *khsathrā* and that *Arta* is synonymous with *Arja*. *Artakhsathrā* therefore means as much as ruler of the Aryans (*Arter*). The meaning of the second part is derived from *khsathra* the rule, the kingdom (nom. acc. *khsathram*^{61 62})). The names of the Germanic kings *Ariovistus*, *Ermanrich*, *Alarich* and *Erik* have a similar meaning. With regard to the first of these names, I assume, in agreement with Holtzmann⁶³), that the second part of the same name (*vistus*) is to be read *visius* (cf. the Gothic *veisjan*) and that this *visius* has the meaning leader, duke. Holtzmann aptly compares *ags. herevisa dux*, the *wiso dux* mentioned by Notker and the Gallic names *Sigovesus* and *Bellovesus*. Literally translated, the whole word would therefore mean: *dux Ariorum*. Incidentally, the name of the Gothic king *Ariaricus* mentioned by Jordanis also means the same. King *Ariaricus* mentioned by Jordanis. The name of the Ostrogothic king *Ermanrich*, lat. *Ermanricus*, can be explained without any difficulty. goth. *Airmanareiks*, *ags. Eormenrīc*, an. *Jörmunrekr* (= *rex Armanorum*) and that of the Visigothic kings *Alarich* (= *rex Alorum*), which incidentally was also used by a king of the Heruli and a king of the Svebs,⁶⁴) as well as the name of numerous Swedish kings *Erik* (alt. *Eirīkr*). This also explains the name of one of the oldest kings of Ireland: *Eremon* (from^x *Araman*) = white man, just as the names *Arius* and *Aria*, as well as *Ariomanus*, are frequently mentioned on Gallo-Roman inscriptions⁶⁵).

Since the Aryans were the masters of the land, it also explains how the word *arja* could take on the meaning of lord, owner, which, as we know, *arja* (*arja*) really means in Sanskrit; the meaning of the Latin *erūs* (*herus*) lord, owner, as well as that of the Irish *er hero*, chief (as an adjective great, noble) is explained in the same way. I do not think I need to go into all the other secondary developments of meaning here, since their understanding is self-evident from the hints just given. Rich material can be found in Rietet.

It follows from all these considerations that we are perfectly justified in

61¹) Fick, Vergl. Wörterbuch.III. 138.

62) Spiegel, Die altpersischen Keilinschriften. Leipzig 1862, p. 193.

63) Holtzmann, Kelten und Germanen. However, his interpretation of the first part of the word (Holtzmann reads *Hariovisius*) is completely wrong.

64) Jordanis, *De Getarum sive Gothorum origine et rebus gestis* 23, 54.

65) Piet et, *Les origines Indo-Europeennes*.I. 38. ■

using the name Aryan both to designate the bearers of the basic Aryan language and also to designate the individual peoples who have gradually separated themselves from the Aryan stock; that all the objections which have been raised against the extension of the Aryan name beyond Asia are unjustified, that, on the contrary, everything speaks in favor of the Aryans having called themselves so even before their separation. Incidentally, I will prove later that the same meaning - white - also underlies other Aryan names, namely the names of the Belgians, Britons and Hellenes.

The ancient Aryans were distinguished above all other peoples not only by the brilliant white color of their skin, but also by the blond color of their hair. ') We would be surprised if one or the other Aryan people had not named themselves after this striking physical feature. And indeed, the etymology of the names Germani, Galli, TaXaTai does have this meaning (blond men, blondes). The older form of the name Germani is Garmani, as we learn from *Beda Venerabilis*^{66 67}), where it is said that the Angles and Saxons were called Garmani by the neighboring Britons. Since the second part of the compound does not require an explanation, it is only a matter of establishing the meaning of the word gar, for which we can readily assume the Aryan . basic form ghar, since it is well known that Germanic g (first phonetic shift) corresponds to an Aryan gh. But what does ghar mean? As a verbal root, it means exactly the same as ar (al): to burn, glow, shine, gleam.⁶⁸) From this the meaning yellow developed in adjectives in quite the same way as the meaning red-yellow developed from the synonymous roots ar and skand in the Sanskrit aruna rōthlich, ärü lohfarb, Greek savfhk, in addition to the above-mentioned meaning white. We can fully understand this process of meaning development if we go back to the meaning fire-colored on which all these developments are based and consider that fire has different colors (white, yellow, red). The Greek iruproc (from top meaning fire), which sometimes means yellow, sometimes red, shows this transition of meaning quite clearly for our linguistic awareness. Originally, the different bright colors (white, yellow, red) were not distinguished from each other in linguistic expression, but were expressed by one word. It was only in later language periods that the different shades of light color were divided among the root forms formed from one root by means of different suffixes (cf. Sanskrit arguna light, bright and aruna reddish).

66¹) Evidence for the occurrence of the same among the Germanic tribes in large numbers in Zeuss, *Die Deutschen und die Nachbarstämme*. Munich 1837, p. 149 and Ukert, *Geographie der Griechen und Römer*. Weimar 1832-46. III. volume, 1st division (Germania). 1843, p. 198; for the Gauls see Diefenbach, *Origines Europaeae*. Frankfurt a. M. 1861, p. 161 and Roget de Belloguet, *Ethnogenie gauloise*. II. 56.

67) *Beda Venerabilis*, *Hist. eccl. gentis Angl.* V. 9.

68*) Fick, *Vergl. Wörterbuch*. I. 81, 578.

The root ghar appears with the meaning yellow in the following adjectives and nouns: sanskr. har-i (for *ghar-i) yellow, pale, pale, green, har-ita, harrini Fern, yellow, hir-ana Neutr. gold, hir-anja golden, Neutr. gold, hā-ta-ka (for^x ghar-ta-ka) golden, Hase. Gold; zend. zair-i (z from gh) yellow, zair-ita yellow, green-yellow, zair-ina yellowish, zar-anaena golden, zar-anja golden, neuter gold, zar-emaja green, golden; Greek /ko-spo-s, /tao-pos (/ from gh) yellowish, greenish, /oX-o-?, gall, Xkoi] Demeter (the blonde); lat. hel-vu-s, gil-vu-s (h and g from gh) yellow, fei fellis (f from gh) gall, lū-tu-m (from^x hlū-tu-m) yellow dyeing herb, from which luteus⁶⁹); Italian. giall-o yellow; lit. gel-ta-s yellow, 2al-a-s green, raw; Pruss. V. gel-atynan Acc. yellow; Old Sl. 21ü-tü yellow, 21ü-ti Fem.=lett. schul-ti-s Galle, zel-enü green, yellow, pale, zla-to Neutr. gold. In Germanic we have ahd. gül-o, in Goth, gultha- neuter gold, ags. gall-a, ahd. gall-ä, call-ä bile.^x) I do not want to leave unmentioned that altir. gel means white. So there can be no doubt that the Germanic tribes got their name (blond men) from the blond color of their hair. The basic form of the tribe is^x ghar-mana or^x ghar-man.^{70 71)}

The name of the Gauls (Galli, PakaTat) is explained in the same way. Both forms go back to the same root ghar, ghal; the former is ahd. gelo, ital. giallo (from^x gallus), the latter lit. geltas, old sl. zlütü. The only difference between PakaTa and gelta is that in Pakara an a appears between l and t (so-called svarabhakti), which is not unusual.⁷²) The basic form of both names is^x ghal-a-s, ^x ghal-ta-s.⁷³⁾ These

69) This also includes what Diefenbach, Origines Europaeae 346 remarks: "We excerpt from Martin. Lex. philol.: "Cassiodorus G a Ibam imperatorem ita a colore lurido appellatum tradit; alii legunt: a lucido", Here a color name galbus is meant, from which the forms galb-anus,-inus, -aneus originate and to which the Latin bird name galbula also belongs. Galbanus (-inus) means green-yellow, greenish, yellowish, galbula is probably the "golden oriole". These words are formed similarly to our yellow (basic form^x ghal-bha-s).

70) Fick, Vergl. Wörterbuch. I. 381, 579.

71) The name of the Germanic tribes was already known to the Romans before Caesar and was not only adopted 150 years later, as Tacitus, Germ. 2 would have us believe. Caesar uses it as a very common one and the Fasti Capitolini already mention a triumphal procession over Germanic tribes 218 years earlier (de Galleis Insubribus et Germaneis). Brandes, Das ethnographische Verhältnis der Kelten und Germanen. Leipzig 1857, p. 193. To draw the conclusion that the name Germani, because it first appears in Roman sources, is of Latin or Gallic origin, is in my opinion completely unjustified.

72) Sievers, Grundzüge der Lautphysiologie 142.

73) For connoisseurs of linguistic history, I need hardly point out that the lit. geltas, Old Slavic zlütü etc. did not originate in Lithuanian or Old Slavic, but was already present - naturally in a different phonetic form (^x ghaltas) - in the common basic Aryan language. Hence the justification for using appellatives that have only survived in one or the other Aryan language to explain proper names in another language. Incidentally, there is no doubt in my mind that the name of the Goths (Gothi, for which Golthi and Golthes also occur, cf.

names were given to the ruling Aryan people in contrast to the subjugated dark indigenous population - the Celts. The latter and their name will be discussed later.

This explanation of the names Germanic, Gaulish and Galatian, which is both factually and linguistically equally evident, should put an end to the almost endless number of etymological explanations that have been found for these names to date.

The same root ghal is also the basis of the name of the Gelon people mentioned by Herodotus, which will be discussed later.

the compilation of manuscript readings in Closs in his edition of Jordaniis p. 88) is formed in the same way and means the same as lakd-rat (the blondes). The l is dropped before t (th), as is often the case elsewhere.

THIRD SECTION.

Home of the Aryans.

Following the discussion in the previous section, we can now turn to the question of where in Europe the Aryans lived as a unified people before they dispersed in different directions. There is no agreement on this among those scholars who have spoken out in favor of Europe as the original homeland of the Aryans. Latham believes that it is to be sought to the east or south-east of Lithuania, for example in Podolia or Volhynia. Benfey places it above the Black Sea, not far from the Caspian Sea, Peschei on the two slopes of the Caucasus, Cuno in the European lowlands, Fr. Müller believes it must be sought in the southeast of Europe, Fligier in southern Russia, Pösche finally in the Rokytno swamps between the Niemen and the Dnieper. Only Geiger moved them more to the west, namely to central and western Germany.

All these suppositions are based on one-sided considerations and are based on assumptions that either had to be rejected in the preceding arguments or whose incorrectness will be proven in the following explanations. Thus Fr. Müller's view is rooted in his assumption of an Ario-Semitic-Hamitic racial unity, which led him to the further assumption of the Armenian highlands as the starting point of all peoples united in this race. On the basis of this assumption, however, it was obvious that the starting point of the Aryans should not be far from the Ario-Semitic-Hamitic original homeland he assumed, i.e. in the south-east of Europe. Pösche, on the other hand, believed that he had to choose the Rokytno Marshes* because the phenomenon of depigmentation generally found there seemed to offer a welcome means of explaining the origin of his blond race and because Lithuanian is closest to the original language among all the Aryan languages spoken today. As far as the first point is concerned, however, it is unacceptable to allow such a strong, energetic race as the blond to develop in an unhealthy swampy region, and as far as the high antiquity of Lithuanian is concerned, this very fact, as we shall see, testifies that the Lithuanians are not true Aryans, just as in their physical type they by no means correspond to the Aryan archetype established by Pösche himself - the Lithuanians are brachycephalic -, a factor to which he did not attach the importance to the linguistic factor in question that he should have given it in accordance with his basic view of the ethnological significance of the physical in relation to that of language. In general, it should also be noted that for the assumption of Eastern Europe as the original homeland of the Aryans, the decisive factor was initially to find a place that lies more or less in the middle between the western and eastern borders of the Aryan peoples' area of distribution (Celts in the west, Indians in the east). However, it seems to me that the considerations

that guided this decision were not internally justified and were probably partly influenced by the desire not to stray too far from the previously generally assumed center of influence in Asia.

The earlier discussions have led to the conclusion that the Germanic-Scandinavian type *) is to be regarded as the specific Aryan type. This type is now found in the purest and most numerous form in graves wherever Germanic

*) This type appears in the literature under various names: 'Reihengräberform (Ecker), Hochberg type (His and Rüttimeyer), Germanic type (H. von Hölder), Cymric race (Broca), Anglo-Saxon (Davis and Thur- nam), barbarian skull or skull from the time of the migration of peoples (Lenhos- sek), leptoprosopic dolichocephalic type of Europe (Kollmann).

tribes: it is found on the Rhine and Main, on the Meuse and Scheldt, on the Seine and Marne in Frankish graves, on the Upper Rhine and Danube in Alamannic graves, on the Salzach and Würm in Bavarian graves, on the Saone and Lake Geneva in Burgundian graves and on the Thames, Trent and Avon in Anglo-Saxon graves, but is particularly numerous in old and new graves on the Scandinavian peninsula.

However, it is also found in graves that are by no means of Germanic origin, although not as frequently. "In recent times," says Kollmann^x) "it has now become apparent that this skull shape also occurs in areas where neither linguistics nor historical research can somehow prove Germanic immigration. Our chairman (Virchow), for example, has found such evidence in ancient graves in Ehstonia, and such evidence has also been found in the works of Mr. Stieda and his students from the population of Ehstonia; furthermore, they have been found in graves in Greece and from a time when no Germanic immigration is known at all; indeed, they have also been found in dolmens in western France from a time when Germanic peoples had probably not yet appeared on the scene of history. It is therefore a type that has a European distribution and which I call the leptoprosopic dolichocephalic type of Europe because of the shape of the face." Schetelig has also found skulls of this type in Spain, Lissauer in East Prussia, Kirkor in Lithuania, Kopernicki in Eastern Galicia and Bogdanov in the Moscow Governorate. Skulls of the same type were also found in West Prussia, Poznan, Volhynia and Podolia. According to the most competent researchers, all of them showed the row grave form of southern Germany. To attribute these skulls to Germanic peoples, such as the Goths, Bastarns, as is sometimes done, is forbidden by the great age of the graves, which often show stone tools but no trace of metal, as is the case, for example, with the kurgans graves opened by Gloger and Radzimiński in Volhynia.

*) Verhandlungen der XI. allgemeinen Versammlung der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte zu Berlin im Jahr 1880, p. 70. A detailed description of this skull shape is given by Kollmann in Archiv für Anthropologie. XIII. 219.

was the case.⁷⁴) We are dealing here with ancient Aryan and not Germanic graves. It is very noteworthy that the present population of these regions is completely different from the dolichocephalic prehistoric population, as far as we know it from the grave finds. This fact alone is sufficient to show the assumption that Eastern Europe was the original homeland of the Aryans to be completely untenable. For it contradicts every reasonable consideration to place the starting point of a species in general and of a human species in particular - and the Aryan race is such a species after all - in a place where it is either not represented at all or only in faint traces which may be the result of later immigration. What is true of Eastern Europe is also true of Western Europe. The present type of the French is as essentially different from the type of the ancient Gauls as the type of the Lithuanians, Russians, Ruthenians and Poles differs from that of the ancient Kurgan population. We are therefore left with Germany and Scandinavia as the only countries where a considerable proportion of the population still exhibits the old type of row grave. Of these two countries, it is again Scandinavia that differs from Germany, with its 32.2 percent blond population, by a much higher percentage of blondes. In a similar proportion, dolichocephalic people are also much more strongly represented in the Scandinavian countries than in Germany. The figures speak for themselves. According to Barnard Davis, the average latitude index of the Swedes is 75, while that of the Prussians is 78.9. The difference is even greater if the southern German population is used for comparison. As Johannes Ranke informs us²), Prof. Schmidt in Copenhagen found 57% dolichocephalic, 37% mesocephalic (i.e. 94%) and only 6% brachycephalic among the Danish rural population (Jutland and Zealand), whereas according to J. Ranke's investigations the old Bavarian population contains only 1% dolichocephalic, 16% mesocephalic and 83% brachycephalic people. Similarly, the Cymbrian peninsula shows the peak of blondes in Germany; Schleswig-Holstein with 43.35% blond population stands in stark contrast to Bavaria with 20.36%, which is only surpassed by Alsace-Lorraine in terms of the low proportion of blondes in the total population. There is no doubt that the percentage of blondes and dolichocephalians in Sweden and Norway is even higher than in Denmark, but I have not been able to obtain exact figures, if they

74 Kohn and Mehlis, Materialien zur Vorgeschichte des Menschen im östlichen Europa. II Jena 1879, p. 94.

2) Contributions to the Anthropology and Prehistory of Bavaria. III. 165,

have been determined at all. This much is already clear from these data, that the spread of the blondes and dolichocephali, or rather the blond dolichocephali - since blond hair and dolichocephali were originally united - took place from north to south and not vice versa.

According to botanists and zoologists, we could be content with this fact alone to call Scandinavia the original homeland of the Aryans with a certain degree of certainty. the original homeland of the Aryans¹). However, we are in the fortunate position of being able to make a number of other points in favor of this. First of all, the fact that in the Scandinavian countries the blond type is still attaining that full physical development which is praised in the ancient Germanic peoples by Roman and Greek writers, whereas in Germany itself this is no longer generally the case.

Indeed, it is well known that even here one sees in the blue eye and the blond hair external signs of physical weakness, which can only have its reason in the fact that among the blond and blue-eyed of Germany there must be a strikingly large number of people of weak constitution. It is also well known that even in northern Germany the older ages are far less common than in England, Sweden, Norway and Denmark and that, as has often been observed, the dark element in Germany is progressively increasing in comparison with the light element.

Lindenschmit (Handbuch der deutschen Alterthumskunde, I.Theil, 1. Lieferung, 139) has also emphasized the importance of this moment: "If therefore that ancient national skull form could only be preserved in a few regions of our country, it is still found in its original character in southern and central Sweden, a fact of unmistakable importance for the assessment of the ancient peoples' behavior." -

Penka, Origines Ariacae.'

These observations are confirmed by the latest craniological studies in the most glaring manner, whereby I would only like to note that brachycephaly and dark complexion were originally just as connected with each other as dolichocephaly and light complexion, so that in a certain sense brachycephaly can be genomicized for dark complexion. Huxley has long since demonstrated that the ancient Swiss and southwest Germans were predominantly dolichocephalic and only to a small extent brachycephalic, and in this respect differ substantially from today's Swiss and southwest Germans, who are predominantly brachycephalic. The same applies to the current population of Old Bavaria in comparison with the old population of the country. Johannes Ranke determined precise data on this and first communicated it at the VIII General Assembly of the German Society for Anthropology, Ethnology and Prehistory in Constance in 1877³):

Length-width index:	Prehistor. Bavaria:	Old
under 75.0	500	8
75,0--79,9	400	161
80,0-84,9	80	528
85,0-89,9)	20	274)
90,0 - 97,6)		34/ 208
	1000	1000

It can be seen from these figures that the numerical ratio of brachycephals to dolichocephals was exactly the opposite. Since the idea that the prehistoric dolichocephalic Bavarians were transformed into brachycephals over time under the influence of climate, food, etc. must be rejected for the reasons given above,²) we must look for another explanation for this striking phenomenon.

¹) Correspondenz-Blatt der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte. 1877, S. 146.

²) In the same way, H. We Ick er (Archiv für Anthropologie. I. 150) judges about the Germans in general: "Today's Germans, the great majority of whom are not dolichocephalic, cannot possibly be the descendants of a dolichocephalic people. If the original Germanic people were dolichocephalic, then there are **Germanic** Germans in Germany in vanishing numbers."

search. Nor is this at all due to the assumption that many brachycephalic elements came into the country through the war campaigns of Turanian peoples such as the Hungarians. These could not possibly have been so numerous as to displace the dolichocephalic element with such sweeping success.

The only real cause of the decline of the Germanic race in Germany is to be found in the fact that the climatic conditions of the country are not those under the influence of which it was formed and under which it lived for a long time before it set foot on German soil. Its actual homeland must have had a colder climate and must therefore be sought at higher latitudes. Among the countries situated in the north of Europe, however, only Scandinavia can be accepted as such, both for the reasons which have already been developed and for reasons which I shall go on to explain.

The high northern character of the Aryan race and its low resistance to the effects of a warmer climate becomes even more apparent when individuals or entire peoples of Aryan blood are transferred to a country whose climate is even more southern than that of Germany. Tacitus¹) already reports of the Germanic tribes: "minime sitim aestumque tolerare, frigora atque inedia coelo soloque adsue- verunt", probably with regard to those Germanic tribes that had set foot on Italian soil. Callimachus²) compares the Gauls before Delphi to snowflakes

(vvpaSewtv eotxoTs?) that quickly melt away in the heat of the south. Similarly, Florus³) compares the Insubrians to the snow of their mountains.

Similar observations are also made in the present day. Pösche⁴) comments on the detrimental effect of India's subtropical climate on the offspring of the English as follows: "Today, the new conquerors of India, the English, can raise virtually no children in India; they therefore send

¹) Tacitus, Germ. 4.

²) Callimachus, Hymn. in Delum 175.

³) Florus II. 4.

⁴) Pösche, The Aryans 150.

4* these
from the
third to the
tenth year to
cooler
countries.
Despite this
caution, as
an
intelligent
lady who
lived there
for a long
time as the
wife of an
English
official
informed
me, there is
no third
generation
of purely
northern
European
descent in
India. I
recommend
this highly
important
fact to the
attention of
all those

who still tell
us so much
about
Aryans in
India today.
However,
these
conditions
only apply
to children
of pure
Aryan race:
children
whose
fathers are
blond
Aryans and
whose
mothers are
natives have
a much
better
chance of
remaining
alive. As it
is today, it
was
thousands of
years ago:
the
subtropical
climate of
India
quickly
decimated
the ranks of
the
conquerors
of pure
Aryan blood
and made
room for the
half-
breeds."

Peschei
writes in the
same vein:
"While the
Spaniards
adapted to
the tropical
habitat in
the New
World and
the
Philippines,
neither the
British nor
the Dutch
succeeded
in
populating
the West
Indies or the
Sunda
Islands with
descendants
of
Europeans.
All children
born to
English
parents in
India are
sickly and
die when
they reach
the age of
about 10.
Therefore,
the British
send their
children to
Europe as
the
dangerous
time
approaches

and the
same is
done by the
Dutch. A
European
woman in
the Dutch
Indies
thinks very
carefully
before she
agrees to
marry, for
the first
childbirth
usually
costs the
mother her
life."

The fact that the dark brachycephalic element in the population of Europe tolerates the hot climate better than the blond dolichocephalic element is shown by the fact that the former thrives where the latter perish. Thus, for example, the French, who are strongly mixed with brachycephalic elements, survive in the Antilles and in Algiers, where the English and Dutch and even the French of the northern departments, who are quite close to the former in race, succumb to the effects of the heat. The Spanish and Portuguese are in an even more favorable situation, although they are substantially different from both the dark brachycephalic and the blond dolichocephalic races.)²

¹) Peschei, Völkerkunde 21.

⁵) The inhabitants of the Mediterranean countries occupy an exceptional position in this respect because, as the example of the Jews shows, they are capable of acclimatization everywhere.

In order to maintain their rule in India and the Sunda Islands without too great a sacrifice of human life, the English and Dutch have in recent times introduced a system of rapidly changing officials and soldiers there.^x) But how could the old Aryans, who were no longer connected with the mother country and lacked the aids of modern civilization, establish their rule there and maintain it victoriously for centuries, when Icelanders who move to Copenhagen succumb to consumption there? This can be explained by the fact that, to a certain extent, the possibility of acclimatization exists for every race if the transitions to other climates take place gradually and over long periods of time. ²) This was indeed the

case with the Indian Aryans and I will prove later that the Aryans made several stages on their migration to India and that at least a millennium had already passed before they came from their Scandinavian homeland to the Pendschab. It should also be borne in mind that they may not have been completely unmixed, but were often mixed with allophilic elements that increased their resistance to the influences of the subtropical climate. These two circumstances may have had the effect that the decline of the Aryan race in India did not occur suddenly, but only gradually.

After these explanations we can easily understand how it could come about that the Aryan type is either not represented at all or only in faint traces in a number of countries where Aryan languages are spoken, and in particular that the blond color of the hair decreases the further south we go. But we also understand a number of striking phenomena in the political, national and social life of the Aryan peoples. It is self-evident that as the Aryan component of a people became numerically weaker as a result of greater mortality, its position vis-à-vis the subjugated and violently suppressed tribal population deteriorated and that the ruling class gradually had to decide to give the latter back some of the rights it had been deprived of, if not to put it on an equal footing with itself.

¹) Pöschel, op. cit. 234.

²) Peschei, op. cit. O.

The long struggle of the non-Aryan plebeians against the Aryan patricians in Rome, for example, which, as is well known, ended with the complete victory of the former, falls under this aspect. The rapid decline of the Germanic empires in Italy, which even ended with the complete abandonment of the former victors in the nationality of the defeated, falls under the same aspect, which would otherwise be quite inexplicable in view of the extremely powerfully developed racial and national consciousness that characterizes all unmixed Aryans. This also includes the fact that at present in Germany, as well as in the other countries of Central Europe, where the blond dolichocephalic element is present alongside the dark brachycephalic element, both elements are on an equal footing in political and social terms and representatives of the former are also found in large numbers among the higher social classes. This position was even partly achieved by the latter in the Middle Ages, which would otherwise be inexplicable in view of the closed organization of the estates at that time, even if we wanted to attribute to Christianity an influence, however great, on the mitigation of racial antagonisms. For example, H. v. Holder¹) has shown that the brachycephalic (Ligurian) element in the town of Esslingen in Württemberg from the 12th to the 16th century in the middle and upper classes. Century in the middle and higher classes increased by

about 30 percent. It must have been similar to Esslingen elsewhere. The greater mortality of the Germanic element made it possible for the lower classes to climb the rungs of the social ladder faster than would otherwise have been the case. This is particularly true of southern Germany and Switzerland.

The situation is somewhat different in northern Germany, which is also much closer to the homeland of the Aryans. Although it was once largely inhabited by Slavs and these Slavs have been completely absorbed by the Germanic element, the latter is still more strongly represented here than in southern Germany and Switzerland. The colder the climate, the better the Aryan race is preserved.

The situation in France is similar to that in Germany. Here, too, the once so powerful Aryan-Gallic and Aryan-Germanic

*) Archiv für Anthropologie. II. 79. manic element suffered numerically and physically very severe losses¹), so that the descriptions which the old writers have sketched of the physical habitus of the ancient Gauls, or Germanic tribes, no longer fit the present inhabitants of France at all.

Roget de Belloguet²) comes to the conclusion "que le type gaulois considere dans son ensemble tel que les anciens l'écrit, est entièrement perdu dans les trois quarts de la France et ne montre, sauf de rares exceptions, que singulièrement affaibli, soit dans notre Bretagne, soit dans quelques-uns de nos départements septentrionaux. It is best preserved in Belgium, and especially in Flanders; but as in Holland, in the Prussian Rhineland and in several parts of our territory, in Normandy for example, it has this persistence due to the nominative Germanic elements which, at various times, have been able to reassert themselves. It is to these latter that one can say, rather more than to the Gaulish people, that the high waists, blond hair and blue eyes of the majority of these populations are reminiscent."

This much is clear from these explanations: neither Germany, as Geiger believed, nor France, nor even Central Europe could be the original homeland of the Aryans.

But if it is to be sought in the far north, we can also expect to find reminiscences of it in the old traditions of the Aryan peoples, all the more so as the traditions reach back to even earlier periods not only among the Aryans but also among other peoples. In fact, they can also be proven in the most definite way. According to the Zend-Avesta, the Aryans came from a land where the summer lasts only two months, and whose climate therefore corresponds exactly to the climate of the northern hemisphere.

¹) This can also be seen in the fact that the order of social and political conditions established by him could not be maintained. After it had already been severely shaken earlier,

its complete collapse . (so-called medieval feudalism) in the great revolution at the end of the last century. Bastian (Das Beständige in den Menschenrassen. Berlin 1868, p. 112) mentions that the German physiognomy is still frequently encountered in French (and Italian) portraits from earlier centuries, but only rarely occurs in more recent times.

²⁾ Roget de Belloguet, Ethnogenie ^auloise. II. 102.

³⁾ Müllenhoff, Deutsche Alterthumskunde. I. Berlin 1870, p.5.

Scandinavia would correspond to. *) The strange verses of the Odyssey X. 81-86 also testify to a precise knowledge of the phenomena of the North:

eßöjjiaTO 6' tx6|f3&a Aajioo autb Tü-okt'söpov, TUIXSKUxov
 AaiSTpuTovwvjv, 6&t -äöijisva skskamv, 6 os T ijskamv u-axoost.
 sv&a x' au~voc dvrrp ootob* i&gpáro jitahouc, TOV piv BouxoXswv,
 TOV o' ap'p^a jiTjXa VOJISUOJV^s syyb; yap VOXTO* TS xat TjpaToc s?at
 xfXsu&ot.

Müllenhoff comments on this passage: "Krates of Mallos (Gemin. elem. astron. c. 5) already found in it the short nights of 2-3 hours that Pytheas had reported from Thule near the Arctic Circle. He even thought that Homer had the region visited by Pytheas in mind. Nowadays nobody will go that far, for everyone will admit to a certain extent that the Homeric fable must contain an implication, namely that in the north or far northwest, where the man-eating giant people of the Laestrygons were relocated, there was once a land where the night was shortened to a few moments, just as Herodotus IV. 25 had heard of a people in the north who slept for six months. The only question is whether and where the Greek could come to such a conclusion in the area around the Mediterranean Sea."

Müllenhoff himself arrives at the conclusion that the area around the Mediterranean is not sufficient for the perception on which the cited verses are based, and that within it the lengthening of the twilight is not conspicuous enough to derive the conclusion of the legend. He therefore considers it most probable that the first legendary tidings of the bright nights of the north came to the Greeks by the same route by which they discovered tin.

^{j)} This original homeland is called Airjana-vaeja, the Aryans^me; it is said of it in the first chapter of the Vendidad in Spiegel's translation (Avesta. Leipzig 1852, p. 62):

9. "Ten are winter months there, two are summer months.

10. And these are cold to water, cold to earth, cold to trees. -

11. Up to the center of the earth, then to the heart of the earth

12. If winter is added, then most of the evil comes". and received the amber,

namely through the Phoenicians, so that it only served them to indicate the location of a people in a fabulous distance. We need not resort to this assumption or to Lauer's even less probable explanation¹⁾). Krates von Mallos²⁾) has correctly seen that what is really meant here are the bright nights of the Arctic Circle, of which the Aryans could have

knowledge from their Nordic homeland.⁸) Indirect confirmation of this assumption can also be found in the fact that the Laestrygons are described as a people with giant bodies of immense strength; it is said of them (v⁷⁵ 119):

oofūmv ib&tpioi Aat5Tpo'pv3> aXXo&sv aXXoc,

-jioptoi, oox avopssstv eotzoxec, dXXa rfyacrvt. -

oip d~o KSTpacov dvopa^flsot /epp.aotoi7tv BdXXov,

If one considers that the Aryan Hellenes often encountered peoples of Turanian and Semitic race on their way to Greece, i.e. peoples of weaker physique than they themselves possessed, it is easy to understand why they populated the far north of Europe with formal giants, since their perceptions forced the idea upon them that the further north a person lived, the larger and stronger he grew. However, the Greeks not only knew about the bright nights of the northern zone, they also knew that the opposite of this phenomenon occurred, namely that the sun was not visible at all on the horizon. This can be seen from Odyssey XI. 12-19, where it says:

ouateTo t'^SXIOC ÔXLOIOVTO TS zaaou dyotott, Tj o s; -stpaP txavs
Ba&oppooou 'Bxsavoto.

svfta 6s Kijijjtspuov dvöpwv 8Tj|16s TS TLoXic TS, Tjspt xal vscpskifl
xskako|ip.svof oö6s TTOT' aÖTou; TjSkwc cpasfkov xaTaospxsTat
dxTivsaatv, o'jfv 6KOT dv GTst/^at zpöc oupavdv dsTspovTcz, ooft'
6T av oty szt yataz dz' oopavoösv zpoTpdzigTat, dkk' s-l vb? okoT]
TSTaTat osikotat BpoTotatv.

These verses become even more important for our question because it is expressly stated that the Cimmerians inhabit this land, which is devoid of the sun,

75 Cf. A m e i s, Appendix to Homer's Odyssey. 2nd ed. Leipzig 1869, p. 47.

²) Geminus, Elem. astron. 5: tprpl (namely Ilu^sa; o MaaaaXt(ü7TjC) jouv iv 70t; -epi 7o5 tbzeavou 7:e-pa7p.a-eufxevot; aövcf ort "£6e(zvuov ot Ba'p^apot QTIOU 6 vjXto; zotp.a7ai." GU'4Batve yap ~£pl 7o6TOÜ? 7GÜ; 761:00; 77f> p.ev v6zra zayreXw; (j-izpav yfrsoOai tbpwv Gt; p.sv B', ot; 6e 7', would be p.eza 7/jV 66atv pttzpou 6iaXet|i'xa7o; ysvjixeovou dzavaTdlXstv e60^u>; TOV TjXtov. Kpa7rj; 6s ö ypajip-aTtzd; cprjöi 7tov 7o^~wv TOUTtnv zat^Opjpov p.v7)p.ovsu5ai cprjalv 'Oöouoaeu; "TtjX^ZUXov ÄatGTpuyovi'Tj'v" ztZ. -epi yap 70b; 7ÜZO'I; 706701";, yivopevTj]; p^GTj; fj'jispa; tbpwv za' toTjuepivwv, fjvu? jj.rz.pa TzavTötiraatv etvat d7roXs(7CS7at cbpwv 7', a "07E zXiqOioTceiv 7Tp 66Giv 7IJ dvaroX'fl z~X.

³) The phenomenon of the bright nights can already be observed in Stockholm. There, from June 17 to 21, the sun rises at 2:45 in the morning and sets at 9:16 in the evening on the first day and at 9:17 on the following days. For a number of days there is no darkness at all, but only a twilight lasting about three hours. In Tromsö there is continuous daylight from May 20 to July 22, during which time the sun is completely visible. Conversely, there is continuous twilight from November 25 to January 17.

and on the other hand it is rightly assumed that the Cimmerians are of the same origin as the Cimbri, who still inhabited Denmark in historical times. The legend now assigns these Cimmerians a significantly more northerly homeland, namely "the borders of the earth formed by Okeanos", which fits perfectly with the Scandinavian peninsula surrounded by the sea, the Aryan homeland.^x) Through all these truthful features of the land of the Cimmerians, the poet of the Odyssey shows that the ancient Hellenes had not yet forgotten all memories of their Nordic homeland. As for the word Cimmerians in and of itself, it is explained as "men of darkness"²); as I will show later, this follows from the etymology of the word and it was also obvious to call the men of the misty north, so often deprived of the sun, by this name.

That Homer's descriptions of the land of the Lästrygons with its bright nights and of the land of the Cimmerians, where "round gray night surrounds the miserable people" and where the entrance to the underworld is located, refer to the Scandinavian north with its wonderful natural phenomena and its great dangers that confront the traveler on land and sea, can be substantiated by other factors that are suitable to dispel any doubt about the correctness of this interpretation.

It is the merit of Möllenhoff *) to have proved that the legend of Odysseus and the German legend of Orendel (ahd. Orentil, altn. Aurvandil) are identical in essence and meaning, and that the similarity extends even to non-essentials. Orendel is, as the same researcher points out, "the man who wanders to and fro on the sea or the man who is ready to sail." The early widespread use of the name among Franks, Bavarians and Longobards in Italy only proves the early widespread use of the myth.

"Yes, this is to be recognized as Proto-Germanic, since a substantial part of it also occurs in connection with an old Norwegian myth of the gods, whereby the production of the more complete and richer German myth, which the crude arbitrariness of the Rhenish minstrel shattered, is not a little facilitated and simplified."

Orendel is obviously a historical figure, one of the first Aryans who had the courage to expose himself to the dangers of the sea on a weak ship. He enters the "raging sea", is caught by the storm after a while and thrown into the wild Klebermeer or Lebermeer. "This is," as Müllenhoff notes, "according to the oldest, most unambiguous evidence, according to the old British view, nothing other than the coagulated sea (mare Cronium) of Pytheas north of the Orcades towards and around the Arctic Circle. Beyond it began the oceanus glaciatus or caligans of Adam of Bremen, the "dark sea" of Kudrun and the Brandansiegende,

^{wj}) Müll en ho ff, Deutsche Alterthumskunde. 1. 30 - 4G.

the Arctic Sea, where at the end of the sky beyond the Elivägar, according to the Nordic Hymisquida, the giant Hymir⁷⁶), the "Twilight", has his spacious dwelling between the icebergs with wide halls and lives like a prince, surrounded by a numerous yielbaked people who live in caves and follow him." Freed from the sea of liver, Orendel's ships are once again attacked by a raging storm and swallowed up by the waves along with the entire army. Only he himself, clinging to a plank, reaches land naked, where he digs himself into the sand and is found on the fourth day by Master Ise, who takes him into his service as a 'servant. His wife soon takes pity on the poor stranger and compassionately provides him with bad clothes. He is finally released. In the Norse myth of Aurvandil, liberation is brought about by Thor's journey, just as in Greek poetry, where it is brought about by the mission of Hermes. The same Norse myth Aurvandil then has the hero return to his wife, just like the Greek myth, while in the minstrel poem he undertakes a bridal journey to Jerusalem to win the bride. There he appears like Odysseus on Ithaca in the most miserable attire, in coarse peasant garb and an unsightly gray skirt. No one knows him and he conceals his name. But after his first victories over the pagans, Bride greets him with a kiss and an embrace as lord and king of the land, and after further victories he climbs into bed with him as her husband, and after further victories, when Orendel finally reveals himself, the "temple lords", Bride's men, also receive him as their lord.

It is not difficult to extract the historical core from the mythical cloak. Orendel-Odysseus, an ancient Aryan king of the north, after having passed all the dangers of a northern sea voyage, happily returned home, where he was no longer expected and had already made arrangements to take possession of his wife and his kingdom. I consider this interpretation of the whole myth to be more probable than the interpretation given to it by Uhland and Müllenhoff, who find a chthonic meaning in it.

76) There is no doubt that the name Hymir- and the name Kimmerier are based on one and the same tribe.

The name of the Nordic Gröa (XXOTI) led the latter to this interpretation, as did the name of the "garment-weaver" Peno-lope, as well as the following consideration: "Wherever one finds matching legends among different peoples, one is always inclined to assume either borrowing or original community, without considering a third, the possibility of equal and matching invention. There can be no question of borrowing here, for the ancient Germanic peoples must have become acquainted with the Odyssey through the Roman antiquarians, who were researching Ulixes on the Lower Rhine and even found an inscription of him in Asciburg, and they must have immediately criticized the fable, which their philological descendants had neglected to do until that moment, or the original fable of the Odyssey must have been transplanted to the Lower Rhine in some inexplicable way. But it cannot be assumed that the myth was common to the Greeks and Germanic tribes, because the primitive Aryan people lacked, if not the knowledge of the ship and the vessel, at least the perception of the sea." Müllenhoff thus comes to the conclusion that the same causes and circumstances also have the same effect and that the same or at least very similar legends arise everywhere where the conditions in the surrounding nature and in the nature and life of the people coincide.

On the other hand, it should be noted that it is by no means true that the Aryans did not know the sea in their original homeland. The contrary can be proved most definitely from the common Aryan vocabulary, as I shall immediately show. This removes the main objection to the assumption of a primordial community of myth, and we are therefore perfectly justified in drawing from it all those conclusions for our hypothesis which we have just drawn.

That the Aryans already knew the sea in their original homeland is evident from the fact that the same name can be found in almost all Aryan languages: sanskr. *mira* ocean; lat. *mare* sea; altgall. *more*, e.g. in *Aremorici*, altir. *muir* sea (gen. 'mara), cymr. *mör*, *myr*, corn. *mör*; lit. *mare-s* plur. *Far*, the lagoon; Old Slavonic and Russian *morje* sea; Gothic *mari-saiv-s* sea, *marei* sea, Old Norse *mär*, Old Norse *mere*, Old Norse *meri*, Old Greek *mari* sea.

The word also found its way into the Finnish languages, a circumstance which, as I shall show later, is particularly suitable to remove any doubt as to the correctness of the assumption that the Aryans had known the sea before their separation. We find finn. karel. olon. meri, ehstn. merri, liv. merj, lapp. mārra, syrj. morä, votj. morja, mordw. more Meer.⁷⁷)

The ancient Aryans also built ships with which they sailed the sea as can be seen from the following words nau, nāvā

ship; Old Pers. nāvi ship; Greek vao; ship, -Eu-V7)Fo->, Eu-V7jo-; n. . pr. with a good ship, the son of the Argo leader Jason; lat. nau- in naufragus shipwrecked, nāvi-s ship; altir. nau, mostly noi, gen. noe ship; altn. nau- in nau-st ship station, nō-r poöt. Schiff, isl. nō-r Nachen hollowed out of a tree trunk (Bugge), ags. naca, alts. nako, ahd. nacho Nachen, mhd. nou, nāwe, nauwe - lat. navis. ⁷⁸) From this follows

- It is unquestionable that the original homeland of the Aryans must have been by the sea. Of course, one could not immediately conclude from this that this original homeland was precisely Scandinavia; it could just as well have been northern Germany or the Cymbrian peninsula. But even in this case, the historical analogy speaks in favor of Scandinavia. The inhabitants of Scandinavia in particular have always been famous as excellent and enterprising seafarers and this fame does not date back to the Middle Ages (Normans), it goes back to the oldest time of which we have any historical knowledge. Tacitus⁷⁹) expressly remarks of the Suiones, the ancestors of today's Swedes and Norwegians: "Suionum hinc civitates, sitae in Oceanum, praeter viros armaque classibus valent." And we understand only too well that Scandinavia, which, surrounded by the sea all around, only allowed its population to spread northwards, had to formally force its inhabitants early on to think of means of transporting the surplus of the increasing population across the sea to the opposite continent. We should by no means think of large ships; we know from Pliny,⁸⁰) that the Germanic pirates still sailed the sea in hollowed-out tree trunks. - And the so-called dugout canoes were still in use on the Alps until our own day, and were only replaced by other vehicles in more recent times.

We have already mentioned an Aryan word (sea) that has found its way into the Finnish language. This is by no means the only word, but a large number of such Aryan loanwords can be found in Finnish. By stating this fact for the time being, we come to the discussion of a question which, both linguistically and anthropologically, is one of the most interesting questions that has come to the forefront of scientific discussion in recent years, but which has a further significance for us in that the question of the actual nature of the relationships that exist between the Ugro-Finnish tribes and the Aryans is also intimately connected with our question of the original type and the original homeland of the Aryans. The Finns are known to be blond, and it was Virchow

77¹) Diefenbach, Völkerkunde Osteuropa's. II. Darmstadt 1880, p. 233.

78) Fick, Vergl. Wörterbuch. I. 130, 653.

79) Tacitus, Germ. 44.

80) Pliny, Hist. nat. XVI. 76.

above all who drew attention to the occurrence of blond hair color in this non-Aryan tribe with particular emphasis and also pointed out that not all Finns are brachycephalic to the extent that had previously been assumed on the basis of a few studies. *) It is obvious that the assumption that the blond hair color and the dolichocephalic skull formation are the exclusive property of the Aryan Itace would be invalid if it could not be proven that the occurrence of the blond hair color among the Finns and their lower width index are the result of crossing with Aryan elements. First of all, it should be noted that important Russian researchers deny with great determination that the number of blondes among the Finns is as large as is usually assumed. Mainow,^{81 82}), for example, says that people have heard from a young age that Finns are blond and have believed it. In reality, however, the opposite is the case: Ahlquist's investigations have shown that the Ostyaks and Voguls are black-haired, Castren has convinced us that blond hair is rare among the Samoyeds, he has found the same even among the Mordvins and the same is also found among the Chudes and there are many more dark-haired individuals than light-haired ones, as is also known from the Kards, the Magyars and the Lapps. According to Mainow, the width index of today's Finns in Finland averages 78.59 and the Lapps 81.61; the Chuden occupy the highest position among all Finnish peoples with 83.37. G. Retzius^x) also comes to the conclusion that the Finnish skulls must be classified as brachycephalic. Stieda²) also notes with regard to the Estonians that only % of 100 of them are truly blond, whereas $\frac{2}{3}$ have dark or light brown hair and that their skulls are on the borderline between medium and short-headedness. Lenhossek's measurements of 130 men of Magyar origin in Budapest in 1875 yielded 82.2 and J. Horvath and J. Pohl, who measured 50 Magyars in the countryside, 83.3 as the mean latitude index. The indices from 81-85 show the highest ratio.³) That the blond and dolichocephalic element among the Finns is of Aryan origin and that all the modifications which the Turanian type has undergone among them have been brought about by interbreeding with Ur-Aryan and Aryan-Germanic elements is irrefutably proved by the language of the former, inasmuch as it shows that in ancient and modern times very close relations must have taken place between Aryans and Ugro-Finns. The great antiquity of these relations is shown first of all by the fact that individual Aryan words can be traced in all or at least in most Finno-Ugric languages, from which it follows that they were already borrowed from Aryan at a time when the Ugro-Finns still formed a unit. I will content myself with a few examples. Thus the Aryan numeral hundred (Sanskrit. *śatam*,

¹) G. Retzius, *Finska Kranier*. Stockholm 1879, p. 194, where it says: "Selon moi, ces crânes doivent être plutôt rangés parmi les brachycephales."

²) *Verhandlungen der IX. allgemeinen Versammlung der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte zu Kiel im Jahr 1878*, p. 109.

³) Cf. P. Hunfálvy, *Die Ungern*. Vienna and Teschen 1881, p. 252.

81¹) *Verhandlungen der VII. allgemeinen Versammlung der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte zu Jena im Jahr 1876*, p. 92.

82) *The old and new Russia*. Volume III (1877). II. Volume, pp. 38-58 and 133-144. Cf. the *Archiv für Anthropologie*. XI. 329.

Greek l-xarov, Old Slavonic süto etc., basic form^x katam) in the following languages: Finnish sata, Estonian sadda, liv. sada, lapp, tjuote, cuötte, tsekke, moksa-mordw. sada, ersa-mordw. sado (sjado), Austrian sydö, šyde, sjudo, syrj. sjo, So, wotj. su. (sju), sjü, ostj. söt, sät, wog. sat, schätt, magy szäs. Similarly, Latin porcus, Old Slavonic prase, etc. appear. Pig (basic form^x parkas) in finn. ehstn. porsas, ehstn. pörsas, liv. perm. pors, liv. pöras. veps. porzas, wotj. pörzas, mordw. purts, dial. purhts piglet, ostj. pursaS, pöres pig.)^x

On the other hand, the Finno-Ugric languages contain words that either do not occur at all in the first language area - the Germanic and Litu-Slavic - or have a phonetic form that is so close to the original Ugrian phonetic form that one can see from this that the relationships between the Aryans and the Ugro-Finns date back to a time when the former still formed a unified people. Cuno already recognized this and commented on it as follows:^{83 84}) "The Finnish vocabulary also shows exclusive common ground with the vocabulary of such Indo-European peoples with whom the Finns, as far as we know, have never come into contact, and the number of these words is too great for one to be reassured by the assumption that Slavic, German and Norse also possessed these expressions in earlier periods, that the Finnish element borrowed them at that time. And this word community is also very significant in areas which belong to the essential heritage of the languages, where borrowing is therefore extremely rare, namely in the number words, in the pronouns, in the expressions for the closest kinship relationships and for the basic elements of ordinary life."^w I recall fin. paimen shepherd, Greek itotpjyq, lit. pemfi, gen. pemens, etc. Shepherd boy; fin. kansa, karel. kanza, ehstn. kaasa and so on. People, entourage, traffic, praep. with in comparison to goth. ahd. hansa Schaar lat. con, cons- in cons-ul; mordw. sandal candlestick in comparison to lat. candela, whereas finn. künntilä, ehstn. künal, gen. küündla, wot. küntteli,

lapp, kyndel, kintel is closer to the Old English kyndill; perm. syrj. kynör, kunör cloud, finn. hämärä, liv. ämär twilight, ehstn. hämmerus, ämmarus darkness, hämmär darkness etc. in comparison to Greek xsjip-spov yap ks-posiv TVJVEITYM . m. v. Kspp,spiot and xap,p.epo;

dykuc, x£|ip.8p0b ayküc, opuxX^ Hesych.; finn. kampa, kämpyrä, kam- pela bent, crooked next to kumärä with the same meaning in comparison to Greek xap.K-^, -6ko*, -rstv, lit. kumpas krumm, lett. kumpt krumm werden, goth. hamfs, ahd. hamf xuXXcfc; finn. karwas herb, bitter in comparison with nhd. herb, ahd. harw, mhd. herwe; syrj. karny, kerny, votj. karyny machen in comparison with sanskr. kr (kar) with the same meaning; finn. kaapa, ehstn. kabi, liv. käba, veps. kabi, finn. vot. kopio, lapp, gwepper, guopper in comparison with sanskr. ^apha, germ. hof u. s. w. Huf (Old Slavonic

83¹) Thomsen, Ueber den Einfluss der germanischen Sprachen auf die finnischlappischen. Translated from the Danish by Sievers. Halle 1870, p. 3 and - Diefenbach, Völkerkunde Osteuropa's. II. 217.
84) Cuno, Forschungen im Gebiet der alten Völkerkunde. I. The Scythians. Berlin 1870, p. 50. -

kopyto); Finnish kapris, kauris, karel. kabriS, liv. kabbör, kabr, lapp, habres, dial. harves in comparison to Old Slavonic hafr, Latin caper Bock; Finnish nepa, Gen. newa, lapp, näpat, etc. in comparison to Old Pers. napät, etc., Ags. nefä, etc. Nephew; finn. tuoni, lapp, tuona death, finn. tuonela, lapp, tuonen eimo underworld, hell in comparison to the Greek OdvotTo* death; finn. tarwas, ehstn. tarwo ox in comparison to the Celtic tarw; finn. lukea read, recite, count, take for something in comparison to the Greek Xsystv, lat. legere. ') From Magyar I add szarvas deer in comparison to lat. cervus, cambr. karw, carw (basic form^x karvas) deer. The works of Thomsen, Ahlquist, Anderson and Diefenbach, to which I refer herewith, contain numerous other lexical proofs of the close relationship between the Ugro-Finns and the Aryans during the proethnic period of both. There is no reason to believe that the Aryan and Ugro-Finnish were originally related, as Anderson is inclined to assume. The great difference in the morphological structure of these languages, their completely different phonetic character, which becomes quite clear when we compare not so much the phonetic forms from the special life of the Aryan languages, but rather the basic sounds resulting from the comparison, as well as the fact that the Finno-Ugric languages on the one hand have so many similarities with the other languages, and on the other hand the fact that they have so many similarities with the other languages.

[^]Diefenbach, op. cit. 224, 226, 227, 228. 229, 234, 237, 259 and Anderson, Studien zur Vergleichung der indogermanischen und finnisch-ugrischen Sprachen. Dorpat 1879, p. 107.

The assumption of a primordial Aryan-Finnish relationship would therefore also have to be extended to the Uralic-Altaic languages, an assumption that is completely inadmissible. But even language borrowing in the usual sense of the word should not be considered in our case. The fact that the Finno-Ugric languages show such numerous and surprising similarities with the Aryan languages, not only in lexical terms but also, as Anderson has shown, even in their morphological structure, speaks against this. Not only the personal pronouns agree, but also in a very special way the demonstratives, interrogatives and relatiya. The word-forming suffixes of the Finno-Ugric languages also show the same form and meaning as those of the Aryan languages. The declension^x) (nominative, genitive, accusative) and conjugation are also very similar to the Aryan languages. In particular, it is the personal endings, some of which come far closer to the basic Aryan forms than is the case in any other Aryan language. These are in the present tense: for the first person sing, n, (formerly) m (from ma) and o, a, for the second person, t (d) (from ta), for the first person plural mme²) (from ma+na by assimilation of the n to m), for the second person, tte (from ta+ta).

On the basis of these facts, one arrives at the conclusion that Lappish is to be

placed among the oldest sources of knowledge for Germanic,⁸⁵ which Dietrich once came to in his studies on the relationship of the Germanic languages to Finnish-Lappish³):

The Finno-Ugric languages are among the oldest sources of knowledge of the Aryan languages and must therefore be taken into account in the study of the Aryan languages, which is similar to the study of

as it was previously believed that all purely Aryan languages or languages considered to be such had to be taken into account.

Such a profound influence of one language by another, as in this case was exerted by Aryan on Finno-Ugric, would not be explained by any means if one wanted ; to consider only fleeting encounters, such as those that occurred in the course of trade.

I . traffic, temporary raids and war campaigns.

| She has a longer stay together in one and the same country

I a necessary prerequisite, and that this was the case is shown by the fact that

! the physical difference (blond hair color) of the Ugro Finns from

the other peoples of the Ural-Altaic language group. If we could determine more precisely the land where the Ugro-Finns lived as a unified people before their separation, we would have gained an important clue for a more precise determination of the direction that the Aryan migration first took, and thus also for a more precise determination of the original homes of the Aryans themselves. According to Ahlquist^x), the original homeland of the West Finns would have to be sought high in the north, roughly between the 60th and 64th parallel. If this assumption were correct, it would argue decidedly more in favor of Scandinavia than Germany as the Aryan ancestral homeland. Only Anderson²) opposes this assumption and believes that the original homeland of the West Finns should be a few degrees further south. From this side, therefore, no ray of enlightenment falls on our question.

The archaeological evidence speaks all the more eloquently for the Scandinavian origin of the Aryans. Dr. Wankel³) already pointed out the deceptive similarity between the stone tools found in southern Russia (hammers, saws, spearheads, daggers, etc.) and those found in Sweden, Denmark and northern Germany. Aspelin then }⁴

85 This similarity becomes even more apparent when one compares with Anderson's remarks what I have discussed in my "Nominalflexion der indogermanischen Sprachen" (Vienna 1878) pp. 123 and 165 on the original meaning of the Aryan *casus* forms.

²) This suffix also appears in Old Slavonic as *-mü* and in Greek as *-jxsv*, phonetic developments from the original *-mana*; cf. hiezu Penka, Indogerm. Nominalflexion 141 Anm. lu Concerning the assimilation of *n* to *m* in Finn. cf. Ujfalvy et Hertzberg, Grammaire finnoise. Paris 1876, p. 17; *-from en-mä* (not *ich*) became *emmä*.

³) Höfer's Zeitschrift für die Wissenschaft der Sprache. HI. 32.

^Ahlquist, Die Culturwörter der westfinnischen Sprachen. Helsingfors 1875, pp. 1, 37, 268 and others.

²⁾ Anderson, op. cit. 117.

³⁾ Mittheilungen der Wiener anthropolog. Society. V. 10.

⁴⁾ Aspel in, Muinais jäännöksia Suoraen Suoun Asumus Aloilta. Anti- quites du Nord Finno-Ougrien. Helsingfors. Petersburg, Paris. In his "fundamental work" on the Finno-Ugric antiquities, he showed that the ancient stone tools not only of the Baltic provinces and Lithuania, but also of Finland and the whole of northern Russia bear an unmistakable resemblance to the Scandinavian ones, so that the ancient stone culture in these countries appears to be a branch of the North Germanic culture, which can be traced as far as Poland and Galicia.

Thus archaeology fills the gap left by linguistics in a surprising way and confirms anew the assumption to which so many facts and considerations have already led, namely that Scandinavia is to be regarded as the original homeland of the Aryans and that from there the Aryan emigration first took the direction towards western Russia and that the Ugro-Finns were the first to experience a significant influence in physical, linguistic and cultural terms from the Aryans.

This by no means exhausts the number of arguments in favor of Scandinavia as the original homeland of the Aryans. I do not want to place any particular emphasis on the fact that, according to ancient tribal legends and the reports of old writers (Jordanis and Paulus Diaconus), some of the most important German tribes came from Scandinavia. This is explicitly reported of the Goths and Longobards and, according to a very old *vita Sigismundi*, the Burgundians are also said to have come from Scandinavia. This at least proves that migrations from Scandinavia took place in historical times and what happened in historical times can also be assumed for prehistoric times. Far more important, however, is the fact that Scandinavia is the only country in Europe in which only Aryans have ever lived and which shows no trace of a pre-Aryan population, as is the case in many other European countries. This is the result of Baron von Düben's investigations, the results of which he presented at the International Congress for Prehistoric Anthropology and Archaeology in Stockholm (1874). ^{x)} He examined hundreds of skulls of the present population of Sweden from all parts of the country and always found the same type. He also found the same type in the⁸⁶ prehistoric graves of Sweden, in the stone, bronze and iron ages. "The differences are different degrees of development, not characteristics of different races; thus the ancient skulls are often much longer than those of today. If two races had mixed in Sweden, the differences between them would have been blurred or lost. However, there are some exceptions in the old graves; out of 100 skulls found in Denmark and Sweden, there are about 10, of which 5 come from Denmark and just as

86 Cf. Schaaff hausen's paper in *Archiv für Anthropologie*. VII. 288.

many from Sweden. They are all from Stone Age graves and clearly belong to the Lappish race; this is indisputable, there is no difference to be found. However, there are other facts which prove that the Lapps migrated north of the Baltic Sea and that they never inhabited the Scandinavian peninsula south of the 62nd parallel." ^{x)})

With regard to these remarks by Dübens, I only remark that the 5% brachycephalic skulls in Sweden belonged in any case to Lapps or Finns who had come into the country either as prisoners of war or as stolen slaves and do not at all justify us in assuming a pre-Aryan brachycephalic population, as we are forced to assume for Germany. The actual Lapp immigration into northern Scandinavia, however, only took place when the Aryans had already changed direction by crossing the sea and had left the inhospitable north of their homeland, so that it could be occupied by the Lapps invading from the east without a fight.

Scandinavia was already regarded by the ancients as the land of origin of the peoples. Thus Tacitus says²⁾); "Ipsos Germanos indigenas crediderim minime- que aliarum gentium adventibus et hospitibus mixtos, quia nec terra olim sed classibus advehebantur, qui mutare sedes quae- rebant", This is a clear reference to a country that existed beforeii

This also agrees with what Thomsen, op. cit. 10 remarks: "Whether they (the Lapps), on the other hand, lived in Scandinavia much further south than they do now is highly uncertain." The skull found recently in a stone grave in Svelrik in Norway, the oldest skull ever found in this country, also shows dimensions quite different from those of the Lapp skulls. *Revue d'anthropologie*, 1882, p. 497"

²⁾ Tacitus, *Germ.* 2.

'Meerc and from which great emigrations took place, and this land can be none other than Scandinavia. Florus^{x)}) says more clearly of the Celts: "Hi quondam ab ul- timis terrarum oris, cum cingerentui* omnia Oceano, ingenti agmine profecti". Pliny²⁾) calls Scandinavia an island "incompertae magni- tudinis and alter orbis terrarum", which shows that the great importance of Scandinavia was not unknown to the ancients. And Jordanis⁵⁾) actually says: "Ex hac igitur Scandza insula quasi offi- cina gentium aut certe velut vagina nationum cum rege suo Berig Gothi quondam memorantur egressi." Paulus Diaconus and Adam of Bremen give a similar opinion.

9 Floyus I. 13.

²⁾ Pliny, Hist. nat. IV. 13.

³⁾ Jordanis 4.

FOURTH SECTION.

Origin of the human races.

We have seen that there is every indication that the Aryans lived in Scandinavia at the time of their linguistic and tribal unity and that we can see their actual homeland in this country. In order to understand this result fully and to comprehend the origin of the European peoples in general, it is essential to consider the question of the connection between the Aryan race and the other races, both the fossil races and those still living today, and this all the more so because the assumption of the Scandinavian origin of the Aryans is somewhat disconcerting for our common imagination, which is accustomed to seeing the cradle of man in Asia or in a warm part of the earth in general.

It is at first highly conspicuous that the Aryan homeland is separated from the distribution area of the Semites, who were initially related to the Aryans, by a broad belt of land that has always been inhabited by Turanian brachycephals. This relationship between the Semitic race and the Aryan race - dolichocephalic skull structure, curly hair growth, the flexive character of their languages, powerful energy of will are the most striking common characteristics of the two races - suggests that they still formed a unit at the time when all other races had already evolved from the common original form. It follows from this that they must also have been closer to each other spatially, that the area of distribution of the Semites extended either more to the north or that of the Aryans more to the south, and that only later did the Turanian element wedge itself between the two.

The question now arises: Did the Turanian element force its way into Europe from Asia, the main area of distribution of the brachycephals, in such a way that it threw the Ario-Semites apart, so that some were pushed southwards and the others northwards and only after this separation did they develop into the special types - the Semitic and Aryan - or did the evacuation of Central Europe happen voluntarily on the part of the Ario-Semites, or was there perhaps another cause that brought it about? The former assumption is quite unlikely. It is contrary to historical analogy, inasmuch as in history the Aryans always appear victorious over the Turanians. There are also other arguments against it, above all the fact that the oldest brachycephalic people in Europe seem to have been completely peaceful. "Neither in their dwellings nor in their burial places was a weapon intended for battle found; what Ross says of the Eskimo in the Baffinsbai, namely that they could not understand what war was, might also apply to them."¹) The second assumption is no more likely. No people leaves its former homeland voluntarily

and without external necessity. We must therefore look for another cause in order to find an explanation of how it was possible that Central Europe became open to a Turanian invasion.

Before we embark on this task, we must first discuss the question of the unified origin of the human race, in order to then consider the question of the primordial seat of the same.

That the human race has a n origin and that the various human races have evolved over the course of time from one original form is supported by facts that are too weighty to allow us to doubt the correctness of this assumption any longer. First of all, the fact that all human races, no matter how different, can produce fertile hybrids with each other, which would not be possible if the races were from the very beginning

*) De Quatrefages, *Das Menschengeschlecht*. II. Leipzig, 1878, p. 66. different species would have arisen, as the polygenistic school assumes. In addition, as Fr. Müller notes¹), the fact that the individual racial characters generally only become clearly evident in the individual after puberty has been reached and that, according to Darwin, racial differences are not detectable at all on the child's skull.

Therefore, de Quatrefages²) could rightly claim: "There is only one human species, if the name species is taken in the sense that it has in the plant and animal kingdoms."

So where was the origin of man and when did he come into being? Scholars have widely differing views on this. According to de Quatrefages it is Asia, according to Darwin Africa, according to Haeckel and Peschei the lost continent of Lemuria, according to M. Wagner northern Europe and Asia, where the cradle of mankind is said to have stood. The latter view is the most probable because it explains both the origin of man and of the human races, as well as the fact that fossil human bones have not yet been found outside Europe and all the factors that speak for Asia and Africa can also be applied to Europe. "During the middle of the Miocene period," says M. Wagner,³) "Europe and northern Asia still had a very warm climate, which to all appearances differed little from the present climate of equatorial Africa. The evergreen primeval forests of palms, breadfruit trees, myrtles and fig trees that covered Europe at that time were well suited to the tapir-like paleotherms, the musk animals and lower species of monkeys that lived there."

The Tertiary period was followed by the diluvial or Quaternary period, which coincides with the so-called Ice Age, during which the temperature conditions gradually changed and the fauna and flora of Europe also changed. As a result of the glaciation of northern and central Europe⁴, which gradually

progressed southwards from the pole, the polar tree flora, above all

Fr. Müller, General Ethnography 32.

²⁾ De Quatrefages, op. cit. I. 102.

³⁾ M. Wagner, Neue Beiträge zu den Streitfragen des Darwinismus. III. origin and homeland of primitive man. Ausland. 1871, S. 560.

conifers spread to central Europe, replacing and displacing a subtropical flora with evergreen leaves. The animal world also suffered no less a change. Some perished, others emigrated to warmer countries. The mammoth (*Elephas primigenius*), the rhinoceros with a bony nasal septum (*Rhinoceros tichorhinus*), the Irish deer (*Megaceros hibernicus*), the cave bear (*Ursus spelaeus*), the cave hyena (*Hyaena spelaea*), the cave tiger (*Felis spelaea*), the horse (*Equus caballus*) belong to those that perished; The hippopotamus (*Hippopotamus amphibius*) and the lion (*Felis leo spelaea*) belong to those that moved to more southerly countries. But there were also animals, such as the reindeer (*Cervus tarandus*), the elk (*Cervus alces*) and the musk ox (*Ovibos moschatus*), which lived through the entire ice age and only after it had passed did they move up from Central Europe to more northerly regions.

The fact that humans lived in the Quaternary period is now generally recognized. Numerous more or less well-preserved skulls, as well as skull and facial bones together with numerous trunk and limb bones, even entire skeletons, have been preserved from this period. On the other hand, the existence of Tertiary man is not yet completely certain, since no remains of him that are undoubted in terms of age have been preserved, but only insignificant specimens of his hand (the striped elephant bones of Saint-Prest, the miocene flints of Thenay).¹⁾ Schaaff-hausen also places the Neanderthal skull in the Tertiary period. Incidentally, these traces of Tertiary man found in Central Europe do not contradict Wagner's hypothesis, insofar as he assumes that it was the Ice Age that provided the impetus for the development of man. In northern Europe, where he places the origin of man, the Ice Age could already have occurred, while in central Europe the climatic conditions of the Tertiary period continued with little or no change. To the same extent that the glaciation of the north increased more and more, the first humans may have fled further and further south, so that at present it seems as if Central Europe, where the

¹⁾ Cf. the remarks by Joly, *Der Mensch von der Zeit der Metalle*. Leipzig 1880, pp. 208 and 52 and de Quatrefages, op. cit. I. 178 and II. 3. The oldest traces of man have been found here, his actual home. What Heer remarks about the temperature conditions of the Tertiary and Quaternary periods also agrees with this assumption: 0 „Already during the Tertiary period a gradual decrease in temperature took place, as a comparison of the Oeninger flora with that of the lower Molasse shows us, and during the Pliocene period the climate approached the present one. In the subsequent diluvial period, the temperature dropped

several degrees below the present one at the time of the greatest glacial expansion."

Apart from the findings mentioned above, the following considerations also speak in favor of the European origin of humans. If Asia or Africa were the original home of man, the emigration to Europe must have taken place in the Tertiary period. However, this is not likely because the initial center of humanity was only a very small one and the number of the first humans was very small, and one could not understand why these few humans should have spread over such enormous distances deep into Europe. However, emigration during the Quaternary period is inconceivable because it would be impossible to understand why people would have swapped a warmer country for a colder one. "What causes should have induced primitive African man," Wagner remarks against Darwin polemically, "to leave his warm, snowless part of the world, richly covered with evergreen plants and fruit trees and populated by numerous hunting animals, in order to emigrate to the colder winter landscapes of Europe, where the struggle for existence becomes so much more difficult and arduous for him?"

On the other hand, we understand very well how, as a result of the glaciation of northern and central Europe, which gradually progressed from north to south, people were pushed further and further south and finally pushed as far as Asia and Africa by the ever-renewing migrations, so that the emergence of the races is the result of the effect of all those external conditions that have asserted themselves both in the European homeland and in the countries to which man later moved. The influence of the new habitats in particular is generally regarded as

*) Heer, *Die Umwelt der Schweiz*. Zurich 1879, p. 596. considered the main cause of the formation of new human varieties. "Great climatic changes on the surface of the earth, such as took place before and after the last great glacial period," says M. Wagner, "have probably had only a slight direct influence on the formation of new species, but their indirect influence must have been immeasurably great through the necessary emigrations of most species, through a displacement of the same first from north to south, then through a partial return migration of many species pushed southward in the opposite direction. These multiple large-scale migrations before and after the Quaternary epoch, which geology calls the Ice Age, favored the formation of countless new species by means of selection. The latter, however, would not have been able to operate without these migrations." De Quatrefages^{87 88}) expresses the same view with particular reference to humans: "We still see how the Anglo-Saxon race, although it has all the means of advanced civilization at its disposal, is transformed into a Yankee under the power of American external conditions. In the same way, man, who was repeatedly placed in

87*) M. Wagner, *Die Darviniische Theorie und das Migrationsgesetz der Organismen*. Leipzig 1868, p. 28.

88) De Quatrefages, op. cit. I. 305.

new external conditions during his great migration, had to be subject to compensatory equalization with these conditions in the various places of residence, i.e. to be transformed: each of these main places of residence had to produce a human race corresponding to it. The characters of primitive man had to be more and more subject to change the further the migration extended and the greater the differences in external conditions. The grandchildren of the first emigrants, who reached the final destination of their emigration, could certainly only bear a few traits of their ancestors."

However, these assumptions are not entirely confirmed by the facts, just as not all naturalists consider spatial separation to be a necessary condition for the emergence of new species. Thus the skull of the Australian and also that of the Negro shows an unmistakable resemblance to the Neanderthal skull found in Germany *), clear proof that the long migrations from Central Europe to Australia on the one hand and to Africa on the other were not in themselves capable of producing any significant modifications to the skeleton of the skull. On the other hand, the highly developed Aryan type developed in Central Europe from the low standing Neanderthal type without any evidence of migration.

The matter can be explained simply as follows. It has been established that the glaciers developed and grew only gradually and that it took a very long time for them to merge into widespread ice fields of considerable thickness and to spread over larger areas. As a result, the necessity of emigrating did not arise all at once for everyone; rather, we can assume with certainty that such emigrations took place several times and each time after a long interval, but that these emigrations were not general, but that each time a part of the population remained behind, which took up the struggle with the increasingly difficult conditions and led them as long as it was at all possible. The natural consequence of this incessant struggle with the difficulties of nature for the preservation of existence was the continual increase in physical and mental strength. These later emigrants could then easily, with the help of their thus increased physical and mental strength, drive their predecessors still further ahead of them and thus take possession of the territory occupied by them, or subjugate it and make it subservient to them. After these explanations, we can easily understand why the peoples furthest removed from the European homeland (Fuegians, Hotten toten, Australians) have remained at such an extraordinarily low stage of development; they were the first to leave Europe and continue their lives under more or less the same conditions and were not forced to fight for existence with richer means of mind and body.

The peoples of the Near East are instructive in this respect. The same was true before the Semitic, or Turanian

^{j)} Huxley, *The Position of Man in Nature*. Translated from the English by Carus. Brunswick 1863, pp. 139 and 173.

Invasion was inhabited exclusively by a tribe whose close relationship to the Dravida

race of India is beyond doubt. These are the biblical Cushites. They are black or black-brown in color and have thick, bulging lips, making their facial features reminiscent of those of the Negro. This is also how they are depicted on Assyrian bas-reliefs. These Kushites were now partly subjugated by the Semites, or Turanians, and partly pushed aside. Their descendants are the pariah tribes of southern Arabia, treated with contempt by the Arabs and given the name Ad, Adites by Arab writers, the Lemluns on the Persian Gulf and the Brahuis in Belujistan, who differ sharply from the Semitic peoples around them.

The migrations out of Europe as a result of the increasing glaciation of this part of the earth took place in all directions with the exception of the north: to the east, south and west. At that time, Europe was still connected to Africa in at least two places (at Sicily and Gibraltar)*; likewise, the Black Sea did not yet have an outlet to the Mediterranean Sea through the Bosphorus and the Dardanelles. Both seas were inland lakes *) and it was therefore easy > to get from Europe to Africa and Asia Minor on dry land. Furthermore, the deep-sea measurements of the Challenger expedition have made it very likely that Europe was also connected to America (Plato's Atlantis) and that America received part of its original population from Europe and Africa via this continent, which later sank, as A. Retzius had long assumed on the basis of the close relationship he believed to have found between the so-called Red Indians, as well as the Carib and Guarani tribes and the Hamites of North Africa, to whom the ancient Iberians again belong as closest relatives. In contrast to these "American Semites", who came from western Europe-Africa, the "American Mongols", who form the greater part of the indigenous American population, immigrated from eastern Asia.

^{j)} This can be seen from the fact that the fauna and flora in the entire Mediterranean area have one and the same character, as has been proven by the latest studies.

Müller's Archiv. 1858, S. 135.

Thus it can be explained that the individual races, compared with each other, represent an ascending series of development, which reaches its climax in Europe in the Aryans. The individual links in this chain are the Australians, Papuans, Dravidas and Semites on the one hand, and the Hottentots, Kaffirs, Negroes, Fulahs and Hamites on the other. This also explains the similarities that exist between such widely separated races as the Negroes, Australians and Europeans of the Neanderthal type.

An emigration from the North European center of origin to Central Asia must have taken place very early. Under the peculiar external environments of these central parts of the great continent, which no other part of the earth occupies to such a great extent, a new race had to develop (the so-called Turanian or Mongolian race), which later also populated Central Europe after the latter had been populated after the end of the Ice Age. ^xThis is evident from the fact that, as will be shown later, the oldest skulls of this Turanian population that have been

found in Europe are relatively young and the older finds provide no evidence that the Turanian race developed on European soil. In this case, the application of Wagner's migration theory seems to me to be completely justified, especially since the psychological

J) The view that the cradle of the human race was in the north is curiously supported by the Vogul creation legend, according to which the supreme god, Numi Tarom, created the human race in the north. And that the movement of the peoples of the Turanian race was originally directed from west to east is shown by the history of the Chinese, apart from the Mongoloid population of America who immigrated from Asia. They were by no means the original inhabitants of the country, but migrated into it in prehistoric times from their former residences in Inner Asia, probably in the vicinity of the Kükä-Nor, following the upper course of the Hoangho, in order to settle first in the province of Schen-si. In any case, the reverse direction in the movement of the Turanian peoples only began in a later period. The spread of the Turanian peoples across the northern parts of Asia also took place later, as these, like the "neighboring" northern parts of Europe, were glaciated during the ice age and therefore uninhabitable. Castren, *Ethnologische Vorlesungen über die altaischen Völker*. Petersburg 1857, p. 89.

character of the Turanians can easily be explained by the character of the steppe.

It has already been mentioned that not all animals left Central Europe during the ice age. The same is true of man, traces of whom can also be found in all stages of the same period. So what happened when Europe took on its present form at the end of the Quaternary Period, the glaciers returned to their present boundaries and the uniform island climate with very low temperatures was replaced by a continental climate with high degrees of heat and cold? Then all those animals that no longer found the temperature suitable for them left central Europe and moved northwards: above all the reindeer, whose predominance characterizes the last period of the Ice Age, the wolverine, the ice and gold fox, the white bear, the musk ox, etc., animals that are now native to the polar zone, but which populated central Europe during the Ice Age⁸⁹). Another part of the animals remained behind, such as the chamois and the ibex, but retreated to the mountain heights in order to continue there, under similar temperature conditions, the life they had previously led on the plains. In a similar way, the beginning of the ice age resulted in the migration of a part of the fauna and humans to the south.

"This divergence of animal species/⁴ says de Quatrefages²), "was bound to have an effect on human behavior as well. If the game, on which they mainly fed, moved away completely, then at least a part of the population had to decide to follow the game, i.e. to emigrate with it/⁴

After these explanations, it will no longer seem strange to us to see Scandinavia as

89 Cf. Fraas in *Archiv für Anthropologie*. II. 37.

²) De Quatrefages, op. cit. II. 7.

Penka, *Origines Ariacae*,

the starting point of the Aryan race. The people who emigrated from Central Europe to the north at the end of the Ice Age were undoubtedly the ancestors of those men who later spread from their new homeland on their migratory and victorious journeys across the whole of Europe, part of Asia and Africa. Scandinavia was at that time

The first people were still connected to northern Germany and it was therefore easy to migrate to the Scandinavian north. "At that time and even much later after the immigration of the first people into southern Sweden," says Nilsson, one of the most thorough experts on the prehistory of Scandinavia, "the southern part was landlocked with the northern German mainland." The same Nilsson also assumes that Scandinavia got its population from the south, an assumption that is also confirmed by archaeological finds. "The human tribe that first appeared in southern Sweden must have come from more southerly regions; the northern part of the peninsula had, it seems, not yet sufficiently overcome the effects of the ice age to be habitable for humans and land animals." ¹⁾ Even according to Torell's investigations, there is no evidence to support the assumption that man already lived in this country during the glacial period, as all finds from the Stone Age belong to the later period of polished stones. After all, the complete glaciation of Scandinavia had made it impossible for man to live there.

Two of the most remarkable characteristics of the physical habitus of the Aryan race now find their easy explanation: the light complexion (blond hair, blue eyes and white skin) on the one hand and the extraordinary height of stature on the other. The former characteristic is known to be due to a lack of pigment, while the dark coloring of the hair, eyes and skin is caused by an abundant deposition of the same. The fact that there is a connection between the light complexion and the low temperature of the north was already recognized by the ancients²⁾ and more recent physiology has succeeded in establishing the actual cause of this phenomenon.

¹⁾ Nilsson, *Das Steinalter oder die Ureinwohner des skandinavischen Nordens*. Hamburg 1868, pp. 183 and 188.

²⁾ *Ar. ist.*, Probl. XIV. 4, *PI in.*, Hist. nat. II. 80, *Gal.*, De temperam. II. 5. and XXXVIII 2. (xal ZCCVTE? 6e oi rēpo; apxxov zu[^]porpi[^]s; xat Xeuxorpt/dg sidtv), *Vitruv.*, Arch. VI. 1, who says of the northerners that they are "imma- nibus corporibus, candidi coloribus, directo capillo et rufo, oculis caesiis," in contrast to the southerners "brevioribus corporibus, colore fusco, crispo capillo, oculis nigris, cruribus invalidis."

Schaaffhausen discussed this question at the Autumn Meeting of the Natural History Society of the Prussian Rhineland and Westphalia on October 6, 1878. Rheinlande und Westphalens on October 6, 1878¹⁾) and pointed out that the fact that the rawest peoples and all anthropoids, indeed mammals in general, have a dark eye, proves that the blue eye emerged from the dark eye and is therefore younger than the latter. The blue color of the iris, however, is only an optical phenomenon like that of air, water and ice; it occurs with a small amount of pigment. It must be explained in the same way as the lack of pigment in white skin in the temperate zone. The carbon is breathed away here, which is deposited in the skin of the Negro. ²⁾ The blond people originally belong to northern regions and a belt of them runs through Asia as far as China. The pigment adheres more firmly to the hair and eyes than to the skin. If the polar peoples are dark, they may not have been in the north long enough for the cold to have had an influence.

In fact, K. Maurer has also shown that the Eskimo did not immigrate to Greenland until the 15th century and it can be assumed that Greenland was still a really green country at that time and had a milder climate, as was certainly the case a few centuries earlier. The fact that the period of 400 centuries was not enough to change the black color of the hair and eyes into a light one will not seem remarkable to anyone. It is more remarkable that the Finno-Ugric tribes of the Lapps, Ostyaks and Samoyeds, who can be assumed with a high degree of probability to have inhabited northern Europe and Asia since the beginning of the present geological period, have in no way been influenced by the Nordic climate. This circumstance suggests the idea

¹⁾ Verhandlungen des Naturhistorischen Vereins der preuss. Rhineland and Westphalia. 1878 Correspondenz-Blatt 106 According to a letter from Schaaffhausen dated June 10, 1882, a more detailed work on this subject is in prospect.

²⁾ Seligmann (Geogr. Jahrbuch. I. 445) has already expressed himself in a similar way on this point: "In the hot zone, in the warm air, which contains less oxygen in the same space than cold air, tropical man does not breathe more frequently, the function of his lungs is less, and the carbon which they do not exhale is deposited as pigment."

6*

suggests that the Aryan race, which did not immigrate to Scandinavia until after the end of the Quaternary period, did not acquire its blond hair and blue eyes in its new Scandinavian homeland, but that it brought them with it from Central Europe, and that we therefore see in them the result of the influence of the Ice Age, an assumption that is all the more probable when one considers that this period lasted many millennia.

The extraordinary physical strength and size of stature, which distinguish the unmixed Aryans from all other races on earth, was also a consequence of the extraordinarily difficult conditions under which they had to live for thousands of

years. Under such conditions, only the strongest children were able to survive, and a large proportion of them succumbed early to the harmful effects of the climate, against which there was insufficient protection at that stage of civilization. Through thousands of years of hereditary accumulation of the characteristics acquired by each generation, however, such a strong race had to develop in the end, as we have come to know the Aryan race in one of its main peoples -> the ancient Germanic tribes. The seven-foot tall (septipedes) Burgundians of Sidonius Apollinaris¹) are no poetic exaggeration; they really lived and their skeletons have been found in the Burgundian slab graves in the Rhone region. The same or similar causes have also produced the same result elsewhere. I remind you of the Patagonians, who are physically so extraordinarily well developed; I further remind you that the highlands of Mexico and Peru, as well as the highlands of Abyssinia and Nubia, have also produced stronger and at the same time more intelligent tribes. The example of the Slavic peoples in Austria is particularly instructive. As Dr. Göhlert²) demonstrates with rich material

¹) Sid. Apoll., Epist. VIII. 9 and Carm. XII.

²) Mittheilungen der Wiener geographischen Gesellschaft. 1881, p. 378: "If one divides the various tribes of the monarchy according to their size, the Dalmatians stand out for their size, followed by the Serbs (Serbo-Croats) and Slovenes; the Germans are somewhat smaller than them. The Czechs are the same size as the Germans, followed by the Ruthenians and Romanians. The Magyars and the Poles (especially the Mazurs) belong to the smallest group of people." In terms of body length, the Dalmatians (mainly Croats) precede all Austrian peoples; on the other hand, the equally Slavic Poles, especially the Mazurs of Galicia, who inhabit the plains, are the smallest people in Austria. If this combination is already instructive, its significance becomes even more apparent when one considers that the Gorals of the Carpathians, who are also Polish, are much larger and stronger than their closer tribesmen in the plains. For the latter, the struggle for existence is made easier, while for the former the less favorable conditions of existence force them to exert their physical strength to a greater extent.

The struggle with the difficult conditions of the ice age could not remain without favorable consequences in intellectual terms either. M. Wagner aptly remarks^f): "Struggle and work took the place of a peaceful life of enjoyment, and along with them came thinking. Thinking is also work and the restless exercise of the thinking organ had to strengthen and enlarge this organ."

There is therefore a profound truth in Baer's words: "Europe was the high school for mankind, where it was forced to work and where it learned to love intellectual pursuits."

I have already explained earlier that we can see the specific Aryan skull shape in Ecker's serial grave form. If the Aryans really migrated from Central Europe to Scandinavia

at the end of the Ice Age, it must still be possible to find skulls in the fossil skulls of the Quaternary period that show the characteristic features of the Aryan skull shape, albeit with the hallmarks of more primitive development. These skulls are present and show an unmistakable resemblance to the skulls of the Germanic row graves, as can be seen immediately when one examines the

¹⁾ Ausland. 1871, p. 562 Kinkelin, *Die Urbewohner Deutschlands*. Lindau and Leipzig 1882, 8. 6: "No greater good could ever have come to man than the fact that the first human couple was expelled from the carefree paradise. The progress of man reflects the nature in which he lives; if his existence is easy for him, if Mother Nature offers him everything he needs voluntarily, he is content; but if he has to wrest his existence from nature, his powers develop, the means increase and expand, which primarily enable him to survive the struggle for existence against hostile forces - and there are quite a few of them, and they are not insignificant."

de Quatrefages' description of these skulls (the skulls from Egisheim, Neanderthal, Brûx and La Denise, Clichy, from Olmo near Arezzo and from Gibraltar) combined to form his Canstatt-Race is compared with the description given by Ecker of his serial cemetery form.

"The skull of the Canstatt-Race," writes the former,¹) "is characterized by several peculiarities. On all male skulls, the eyebrow ridge, which protrudes so strongly on the Neanderthal skull, is more or less prominent, and the forehead, which is narrow and low in itself, seems to fall away all the more for this reason; the skull roof, which is depressed, as it were, is fairly regular in the two thirds in front, but rises beyond the occipital protuberance and extends backwards. The entire skull is relatively narrow, so that the cranial index drops to 72. All the bones are particularly thick; on the skull of Egisheim they are up to 11 millimetres thick. Some of the peculiarities of the female skulls are less pronounced: the eyebrows are almost completely receded, the occipital bone is less protruding, and the upper end of the scale is less prominent. The upper end of the scales no longer rises so strongly, the cranial index has increased by a few percent, but the cranial vault is still strongly flattened in them too."

Ecker gives the following description of the skulls of Germanic row graves²): "The skull is elongated and narrow", the forehead rather narrow and often low, the arcus superciliares in male skulls in most cases strongly developed³);

¹⁾ De Quatrefages, op. cit. II. 21.

²⁾ Ecker, *Crania Germaniae meridionalis occidentalis*. Freiburg 1865, p. 77.

³⁾ The *torvitas oculorum* of the Gauls, of which Ammianus Marcellinus speaks, was in any case based on these strongly developed eyebrow arches. Tacitus (Germ. 4) also calls the eyes of the Germanic tribes *truces*. And Caesar says (B. Gall. I. 39): "*ne vultum quidem atque aciem oculorum Germanorum ferre potuisse*." In the case of the military officer F. M., a man

of gentle character and moderate intelligence, who died a few years ago in Vienna, the eyebrow arches were so prominent that his whole face gave the impression of great ferocity. Cf. also Schaaffhausen's remark on this point in his treatise: "Zur Kenntnis der ältesten Rassen" in Müller's Archiv. 1858, S. 469.

the crown is either more flatly arched or it rises gradually from the temple line to the dart line in the shape of a roof. The parietal tubercles are usually completely blurred. However, the strong development of the occiput is particularly characteristic. This is long and protruding and is usually separated from the crown by a slight depression at the site of the small fontanel."

The mean width index calculated by Ecker from 18 row cemetery skulls is 71.3, which is almost identical to the width index of the Canstatt race (72).

Virchow's statement¹) about the Engis skull, also from the Quaternary period, is also remarkable: "The famous skull of Engis, which is unique in terms of its age, as well as the accompanying child's skull that confirms it, is so exquisitely dolichocephalic that, if one could consider oneself justified in forming ethnological groups solely on the basis of skull shapes, the Engis skull would undoubtedly be a Proto-Germanic one and proof would be provided that a Germanic population had already settled on the Meuse before the first Mongolian immigration."

After the earlier discussions, the geographical distribution of the Canstatt or Aryan race in the Quaternary and subsequent periods becomes perfectly understandable.

According to de Quatrefages, the Canstatt race lived mainly on the banks of the Rhine and the Seine, but extended as far as central Italy, in Bohemia as far as Brüx and in France as far as the Pyrenees. Its distribution was greater in the post-Quaternary period, when it spread as an Aryan race from Scandinavia across the whole of Europe. "The Canstatt type", writes de Quatrefages,²) "is found sometimes completely pure, sometimes more or less modified as a result of interbreeding, in dolmens, in churchyards from the Gallo-Roman period and from the Middle Ages and no less in graves from more recent times from Scandinavia to Spain, Portugal and Italy, from Ireland and Scotland to the Danube.

¹) Verhandlungen der VII. allgemeinen Versammlung der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte zu Jena im Jahr 1876, p. 92.

²) De Quatrefages, op. cit. II. 25.

thale, in the Crimea, in Minsk as far as Orenburg. According to this, this race would have inhabited the whole of Europe from the Quaternary period to the present day."

It should also be noted that the bones of the Canstatt Man indicate an athletic physique and that the shape of the skull and face must have given the impression of great ferocity.

FIFTH SECTION.

Origin of the Aryan peoples.

Immediately after the end of the ice age, Central Europe was either not populated at all or only very sparsely populated, so that there was room for new immigration, which soon took place. .

From the southwest of Europe, people of the so-called Cro-Magnon type moved northwards and spread throughout France, Belgium, England, which was still connected to the mainland for a long time after the Quaternary period, and Ireland. Thus some of these countries (France and Belgium) received a new population,^a others (England and Ireland) the first¹) population at all. This explains the occurrence of ancient dolichocephalic skulls in Neolithic graves in France, Belgium, England and Ireland, which, as Thurnam first recognized and was later confirmed by Huxley, Boyd Dawkins and others, represent a surprisingly high proportion of the population.

*) The question of the age of man in England was discussed at the Anthropological Institute in London in 1877 in the presence of the most eminent English anthropologists, and these discussions led to the conclusion that man in England most probably belonged to the post-glacial period. The referee of "Nature" (XVI. 98) reports: "The general impression left upon our minds is that in Britain there is no evidence of any palaeolithic men, either in caves or the river-deposits of an age older than post-glacial, and that the discoveries of the last fourteen years have merely given us interesting details as to the palaeolithic savage, without telling us any thing of his relation to the glacial period."

with the skulls of the Iberians, Phoenicians and Egyptians. *) In Wales and Ireland, this Cro-Magnon type has survived fairly pure to this day, and I will leave the detailed description given by^e Mackintosh²) of the main Welsh type here: "Stature varied, often slender, neck long. Gait light, hair dark and coarse. The face long or very long, narrow or very narrow, broadest under the eyes. Below the protruding cheekbones a sudden sinking in. The chin very narrow and receding, but sometimes prominent. The nose narrow, long or very long, sometimes approaching a Jewish shape. Forehead narrow but not receding. Skin wrinkled and either dark or of a dark reddish-brown color, skull narrow and very long." This is the type that is usually referred to as Milesian.

Far more important than the immigration of the Cro-Magnons to Central Europe is the Turanian immigration from Asia. Central Europe was probably still steppe country at that time and so the new immigrants were able to continue their lives there under similar conditions to those they were used to in their Asian

homeland. Immigration may have been all the easier

Descendants of these immigrants were the Silures (in South Wales), who were already attributed Iberian origin in ancient times because of their dark complexion and their mostly curly hair; Tacitus (Agricola 11) says of them: "Silurum colorati vultus, torti plerumque crines et posita contra Hispania Hiberos veteres traiecisce easque sedes occupasse fidem faciunt." Descendants of these Silures still exist today. Boyd Dawkins (The caves and the aborigines of Europe. Translated from the English by Spengel. Leipzig and Heidelberg 1876, p. 180) writes: "This non-Aryan blood can still be recognized today in the dark-haired, black-eyed, small, oval-faced people of the Silurian region, where the mountains offered the Basque population protection from the invading Races. The small, dark Welsh man from Birghshire is identical in every respect, apart from language and dress, to the Basque inhabitants of the western Pyrenees near Bagneres de Bigorre. According to Thurnam and Huxley, the small, dark-haired population of Ireland is also of Iberian descent.^K Incidentally, the old Phoenician source of Avienus also recognizes the name of the Silures in southern Spain.

²⁾ Anthropological Review. IV. 1 Cf. Andree's treatise: "Die Ueberreste der Kelten" in Globus. XXXVII. 263.

when the immigrants met with no serious resistance in the greater part of eastern and central Europe, and could easily master the Cro-Magnon type of people opposing them in western Europe, since, as the preserved skeletons testify, they were physically superior to them. The nephrite axes that have been found in significant numbers in Europe originate from them, but in any case were brought from Asia, because it is well known that nephrite is completely foreign to Europe.

As a result of this Turanian immigration on the one hand and the preceding emigration of the Canstatt race to the north of Europe on the other, the spatial connection between the latter and the Cro-Magnon race that preceded it was broken and so it came about that the center of radiation of the Aryans (Scandinavia) borders directly on areas populated by Turani, visible elements.

Until a few years ago, the Turanians were still regarded as the actual indigenous population of Europe. Since the Basques were thought to be the last remnant of this population and A. Retzius had declared them to be brachycephalic on the basis of very scanty material (2 skulls), it was obvious to assume that the brachycephalic elements, which were so numerous, were the first inhabitants of Europe. However, it has been proven that the Basques are predominantly dolichocephalic and belong to the Cro-Magnon type, and that long before the brachycephals, dolichocephals of both the Canstatt type and the Cro-Magnon type lived in Europe. "In the deepest gravel layers of the plain of Grè-nelle," notes de Quatrefages,¹) "only dolichocephals, namely of the Canstatt race, have been found so far. In the alluvium, at the same level as erratic blocks or even below them, at a depth of 3-4 meters, dolichocephali belonging to the Cro-Magnon race were found. Only closer to the surface, at a depth of $2V_2$ and $1\frac{2}{3}$ meters, there are skulls that are more or less brachycephalic."

Nevertheless, de Quatrefages places the oldest brachycephalic skulls found in Belgium and France, the skulls of Furfooz, Grenelle and Truchere, in the Quaternary period, on the basis of the fauna found in the caves of Chaleux and Furfooz. "The age of the polished

*) De Quatrefages, op. cit. II. 17.

Stones cannot be extended to where the chamois, the ibex, the antelope saiga lived together with the Norwegian rat and the ptarmigan in Belgium." ⁹⁰) However, he adds cautiously: "This point perhaps deserves further investigation." Indeed, the presence of fragments of pottery found in all the sites investigated by Dupont in Belgium, and a few other occurrences, have been considered by excellent scholars, namely Cartailbac and Cozalis de Fondouce, as proof that these sites have nothing to do with the Quaternary period, but rather belong to the age of polished stones (Neolithic period). In any case, they got it right, and the faunistic aspects asserted by de Quatrefages cannot weaken the importance of these archaeological aspects, since they cannot be considered as full proof of the continuation of the glacial period, but at most testify to a kind of transitional period.

On French and Belgian soil, the brachycephals that migrated from the east met and interbred with the Cro-Magnons that came from the south. At least some of the skulls belonging to this group show the character of a mixed form; the width index of one Furfooz type is 79.31, of the other 81.39, while the Grenelle type reaches 83.53 in males and 83.68 in females, and the Truchöre type, with a width index of 84.32, has the character of complete brachycephaly.

The latter types can be regarded as unmixed. They show a striking resemblance to the skulls of the Lapps, which is why de Quatrefages and Hamy grouped them together in their Lapp type. This lobe type is identical with what Pruner-Bey understands by his Mongoloides and H. v. Hölder by his Turanian race.

While the people of the Canstatt-Race and the Cro-Magnons are European autochthons and have already lived in Europe during the Quaternary period, the Mongoloids immigrated there and have lived there since the present geological epoch. However, they are currently the numerically most important element of the population of Europe, especially of Central and Eastern Europe, as I will demonstrate in detail later. Now I return to the Cro-Magnon type.

What are the characteristic features of this type and in which peoples has it been preserved in its purest form? The skull of the Cro-Magnon type is dolichocephalic and the width index of the great old man of Cro-Magnon (in the Vezere valley in southern France) is 73.76, which is quite close to the width index of the Neanderthal skull. Otherwise, however, the Cro-Magnon skull is dissimilar to the Canstatt skull. Its forehead is broad and high, without particularly prominent frontal sinuses; the skull roof is also regularly shaped.

The facial axe is particularly peculiar in that the middle and upper part of it is extraordinarily widened. The orbital openings are also very wide, but very low. In contrast, the median part of the face and also its lower part do not share in this widening. The alveolar margin of the narrow upper jaw appears protruding, so that a decided prognathism is evident. The lower jaw has a ramus adscendens of great width. The chin is triangular and decidedly protruding. "The open forehead, the large, narrow and curved nose of the people of Cro-Magnon," concludes de Quatrefages¹) his characterization of this type, which I have just shared in excerpt, "were probably suitable to make the perhaps somewhat unusual-looking face with its diamond-shaped outline, in which small eyes probably sat and strongly developed chewing muscles stood out, appear less unpleasant."

De Quatrefages remarks²) that the fossil Cro-Magnon race has not disappeared any more than the Canstatt race, that it is perhaps even more common than the latter, that it is represented in later periods and even among peoples living today. According to Hamy, it is found among the Basques, among the Berbers of North Africa and on the Canary Islands. However, its area of distribution is much wider. The Basques, at least as far as they are dolichocephalic, can be considered the

*) De Quatrefages, op. cit. II. 33.

²) De Quatrefages, op. cit. II. 55. the last remaining unmixed remnant of the Iberians once spread throughout Spain, as W. von Humboldt already assumed¹) and we can therefore also count the ancient Iberians among this race. On the other hand, Tubino has demonstrated²) that the latter are anthropologically and probably also linguistically related to the Hamitic population of North Africa, as at least the large number of topographical homonymies demonstrated by Philipps proves³), and that both - Iberians and Berbers - belong to the Cro-Magnon race. The fact that the Berbers in turn belong to the same race as the Semites in Asia has already been mentioned earlier. But the indigenous population of Italy and Sicily, as well as Greece, also belong to the same race, as can be proven in certain ways.

For example, four Sicilian skulls examined by Morselli show a highly surprising resemblance to Semitic skulls. The same Italian anthropologist also found a striking similarity between a Sicilian and a Bedouin skull.⁴) According to Maggiorani, there is not only a surprising similarity between the Sicilian and Jewish skulls, but also in the character of a part of the Sicilian population. The historical evidence agrees with the results of the anthropological investigations⁶). According to Ephorus⁷), Iberians first inhabited Sicily. Thucydides⁸) in turn reports that the Cyclopes were preceded by the Sicans, an Iberian tribe. Philistus of Syracuse⁹), i.e. a Sicilian by birth, which is also mentioned by

¹) W. von Humboldt, Collected Works. H. 194.

²) Tubino, Los aborígenes ibéricos o los Berebres en la península. Madrid 1876.

³) Proceedings of the histor.-philos. Classe der Wiener Akademie. 1870, S. 546.

⁴) Morselli in Fligier, Zur prähistorischen Ethnologie Italiens. Vienna 1877, p. 10.

⁵⁾ Maggiorani in Fligier, op. cit. 20.

⁶⁾ Fligier, The Prehistory of Hellas and Italy. In Archiv für Anthropologie. XIII. 469.

⁷⁾ Strabo VI. 2, 4: Ἰττιῶν καὶ Ἰβήγων, οὐκ ἐπὶ τῶν Ἰταλῶν βασιλευσάντων Ἐκποπὸς Ἰσθατιάς (ac obsard; and Schol. to Homer, Odysseus. XXIV. 307.

⁸⁾ Thucydides VI. 2.

⁹⁾ Hist. graec. fr. 1.185.

Sicans derives from the Pyrenean peninsula and there was indeed a city called Sicane on the Iberian peninsula. The ancient world therefore seems to have believed that the original inhabitants of Sicily were of Iberian origin.

The original inhabitants of central and lower Italy, as well as the island of Sardinia, were also of the same descent. Nicolucci, for example, has shown^x) that the ancient Japygians were dolichocephalic. The same is also evident from Calori's work²) on the present population of Italy, from which it can be seen that the brachycephalic elements that later (at any rate only during the present geological period) penetrated into Italy have pushed the original population further and further south and in part also assimilated, so that at present the latter forms only a small fraction of the total population compared with the former. Calori examined no less than 2442 Italian skulls and, excluding the female specimens, found 1665 of them to be brachycephalic, with an average width index of 84. Of 100 Bolognese skulls of both sexes, 97 were broad, 16 medium and only 5 narrow skulls. Of 852 heads from Emilia, 733 belonged to the broad, 110 to the medium and 9 to the narrow skulls. Similarly, of 254 heads from the Veneto, Lombardy and the Italian Tyrol, 230 were broad, 23 were medium and only one was narrow. In the Adriatic coastal areas south of Bologna, out of 376 skulls, 265 were broad, 105 medium and 7 narrow. If we move across the Apennines, only 134 of 213 Tuscan skulls are brachycephalic, 59 are mesocephalic and 20 are dolichocephalic. In the former -church state, out of 200 skulls, only 52 belonged to the brachycephalic, 100 to the mesocephalic and 48 to the dolichocephalic. Finally, of 363 Neapolitans, 131 belonged to the broad, 169 to the medium and 63 to the narrow skulls. It should also be noted that the Aryan immigrants, namely the Romans, Gauls and Germanic tribes, who last appeared on Italian soil, were also dolichocephalic.

¹⁾ Nicolucci in Fligier, Zur prähistorischen Ethnologie Italiens 19.

²⁾ Cf. Peschei (Völkerkunde 60) after the paper on Calori's work in the Journal of the Anthropological Institute. I. 110.

were chocephalic and therefore not all of today's dolichocephals can be considered descendants of the original population. I would also like to mention that Pruner-Bey declared the ancient Etruscans to be Semites for craniological reasons.

With regard to the indigenous population of Sardinia, it is worth noting that Pausanias^x) tells us that Iberians with their general Norax landed on the island of Sardinia long before the Trojan War and founded the city of Nora. "The common

name of the inhabitants of Sardinia," writes Kiepert,²), "is mentioned in Egyptian inscriptions of the 14th century as Schardana: the same folk name is later encountered as Sordönes in the eastern Pyrenees, which lends great weight to the view of the Spaniard Seneca³), based on his own local view of language and customs, that the Sardinians were of Iberian origin. On the other hand, the Jolaiani or Hier in Sardinia, who were confined by the Punic conquerors to the higher mountainous regions, are compared to the Libyans in terms of customs and dress, and immigration from the nearby African coast also has some probability. It has been noted that the present-day mountain Sardinians are generally closer to the Spanish than the Italian branch of the Romance system of forms. The name of the 'IoXaot may be related to the place name Joljn Mauretaniën."

Before I turn to the Greeks, I would like to cite the judgment of R. Hartmann, who is one of the foremost contemporary authorities on the anthropological affinity of peoples. "It cannot be denied," he says,⁴) "that among the northern Berbers one finds individuals whose facial features are vividly reminiscent of those of Spaniards and Italians. It is possible that there was a connection between these nationalities even before the pillars of Hercules took on their present form."

*) Pausanias X. 17.

²) Kiepert, Lehrbuch der alten Geographie 475.

³) Seneca, Consol. ad Helviam 8 : "Transierunt et Hispani, quod ex similitudine ritus apparet. Eadem enim tegumenta capitum idemque genus calceamenti quod Cantabris est et verba quaedam in toto sermone ex conversatione Graecorum Ligurumque a patrio descivit". However, this passage does not refer to Sardinia, but to Corsica.

⁴) R. Hartmann, Die Völker Afrikas. Leipzig 1879, p. 23.

Ancient writers refer to the Pelasgians as the original inhabitants of Greece. Their language is described as barbaric by all older historians who still knew remnants of it (Hecataeus, Herodotus, Thucydides), and was therefore fundamentally different from the language of the Aryan Hellenes. These Pelasgians were later subjugated and Aryanized by the latter. Herodotus^x) says of the Attics in particular that they were Hellenized Pelasgians. As a mixed Pelasgian-Hellenic people, the Attics stood in contrast to the Dorians as unmixed Aryan Hellenes. This explains the well-known difference between Athenian and Spartan character, as expressed in the state institutions, way of life, literature and art. As far as the language of the Pelasgians is concerned, Herodotus declares that he can say nothing definite about it. Kiepert has explained several ancient place names (Masyapa, Zaxapitc, Mtvana, 'IapSavos, MaXea, Seta) in a very appealing way from Semitic and therefore also considers the Pelasgei* to be Semitic.²) And that they really belong to the Semitic-Hamitic race, i.e. to the Cro-Magnon type, also results from craniological considerations. According to Nicolucci, the ancient Greek and also the majority of modern Greek skulls show a striking resemblance to the Japygian skulls³),

which in turn, as was shown earlier, have an unmistakable resemblance to Semitic-Hamitic skulls. This can also be seen indirectly from Dr. Weisbach's latest work on the skull shape of modern Greeks⁴). Among 95 skulls examined, he found 40 (42.10%) to be dolichocephalic, 41 (43.15%) brachycephalic and 14 (14.73%) mesocephalic. The brachycephalic skulls are by far the most likely result of historical Slavic immigration and are not relevant to our question. As far as the 42.10% of dolichocephalic skulls are concerned, they must be attributed to the Pelasgian indigenous population and not to the Aryan immigrants, as is clearly shown by the rare occurrence of blue eyes and blond hair among today's Greeks.

Ilerod. I. 57: 'Haav ol IleXasyol βαρβαρον yXöoav Uvuec. eJ TCIVUV rjv xal Tav TOIOÛTO TO neXaayixov, TO 'ATTIXOV ^9VO\$ £6V neXaaytxov &pa T\$ p.gTaBoX'fl T\$ dc FJXipas xat TTJVyZajacfav piaT^pa&e.

²⁾ Kiepert, op. cit. 241.

³⁾ Nicolucci in Fligier, Zur prähistorischen Ethnologie Italiens 19.

⁴⁾ Mittheilungen der Wiener anthropol. Society. XI. 77.

P e n k a, *Origines Ariacae*.

7

Dr. Ornstein found blond hair in only 170 (9.62%), brown in 1561 and black in 36 men, dark hair in 90.37%, as well as blue eyes 122 times (6.90%), grey 362 times (20.48%), both together as light 484 times = 37.38% and brown 1232 times (72.60%), i.e. the dark colors also far outnumbered the lighter ones. ^x) Weisbach even found only 2.12% blond hair and 17.02% light eyes. What else has become known about the physical and mental characteristics of today's Greeks, ²) also places them closer to the Semitic race than to the true Aryans or Slavs.

The name Pelasger also means nothing other than "original inhabitants". The word IlekaCYoi breaks down into the stem zekas and the suffix yot. This Tteka? goes back to a basic form^x paras, which is nothing other than the ablative form (which is known to coincide with the genitive form in conson. stems) of the root par, pra, whose basic meaning is derived from words such as sanskr. pra (prefix)-vor, pra-thama-s der erste, pür-va-s der vordere, püras vorn, vor, zend. fra, frä vor, para vor, Greek -repo vor, -itpm-TO-c der erste, -rcapos früher, Latin pro, porro, umbr. osk. per-ne vorn, lit. pir-ma-s primus, Old Slavonic pra-, pro-, prS- vor, prüvyj, goth. fruma erster, ahd. furisto princeps, goth. faüra. ahd. vora vor is evident³). It therefore means paras as much as "from before, from the beginning" and the basic form^x parasgai "those who are from before or from the beginning (in the country)"= .Ab-origines, which in its formation and meaning is very close to nsXacyoi. However, the Latin Prisci (Prisci Latini) is even closer to the word IIsXao^oi, insofar as it also goes back to^x paras-kai and only has the suffix ka in place of the suffix ga. ^x paras first became piris- through the intermediate form^x peres-^x, from which it became priis- and finally pris-ci through metathesis^x. ⁴⁾

*) Journal of Ethnology. IX. 39 and XI. 305.

²⁾ Diefenbach, Völkerkunde Osteuropa's. I. 145, 147-150.

³⁾ Curtius, Grundzüge der griechischen Etymologie 269 and 284.

⁴⁾ A. Retzius erroneously declared the Pelasgians to be a Turanian, brachycephalic tribe (cf. Müller's Archiv. 1858, p. 111): "That the Etrurians were Pelasgians as well as that the Pelasgians were a Turanian, brachycephalic tribe, I believe I can assume with certainty." The after-effects of this false assertion by the famous founder of modern craniology can still be seen in the latest ethnological works.

Aryans came to the land of these dolichocephalic Pelasgians with dark complexion in order to conquer it and to subjugate and arisize the population. These Aryans called themselves Hellenes. This name also means as much as the name Aryans: bright, light, white. The word "HXXTIVSS, as can be seen from the name of the Dodoheans (later also 'EXXot), is based on a root sar, which means to shine, to shine, to be bright. This is derived from the following words: Greek ssip-to-c sun, dog star, aeip-ia-o) brenne, leuchte, ostp-ia-öt-c sunburn, astp-tvo-? summery, where the t of the first syllable is epenthetic, BX-aw) torch and 'EXew) and 'Hp-a, Latin sör-6nu-s, söl, Sor-änu-s (Apollo), Old Slavonic slü-nice sun, Old Slavonic söl, Gothic sauil sun and so on.)¹

The ancient peoples of Asia Minor, who in turn cannot be separated from the Semitic peoples of the Near East, are closely associated with the Pelasgian indigenous population of Greece (Carians, Lelegers, etc.).)²

The Greeks still recognized the tribal unity of many peoples of Asia Minor with peoples in neighbouring Europe and it is curious that they mostly believed the former to have emerged from Europe (Thrace and Greece) to Asia Minor and not vice versa,³) as was indeed the case.

We thus see that the indigenous peoples of the Pyrenean peninsula, Italy and Sicily as well as Greece and Asia Minor are anthropologically and probably also linguistically very closely related to the inhabitants of the African north coast and the Semitic peoples of the Near East, so that we are probably justified, if one decides to draw certain boundaries for the Races at all, to distinguish all these peoples from the Fulahs in Africa, who initially joined the Hamites, and from the Dravidians and the remnants of the pre-Semitic Cushites in Asia and the Aryans in Europe, and to unite them into a single race, which could best be called the "Mediterranean race", since it resides all around the shores and islands of the Mediterranean Sea. However, since

^{x)} Curtius, op. cit. 551.

Cf. Movers, Die Phönizier. I. Bonn 1841, 8. 15.

³⁾ Diefenbach, Origines Europaeae 46 gives many references to this.

As this name was applied to the so-called Caucasian race at Blumenbach's suggestion, it may well be advisable to refer to this entire group of peoples as the Semites, the most numerous and most important section of the race.

This Semitic race is thus divided into three sections: the Semites (in the narrower sense) in Asia, the Hamites in Africa and the Japhetites in Europe. I would like to use this term after the other two biblical names to describe all the peoples of Europe who belong to this race.

These Japhetites in turn fall into two sub-divisions, one of which comprises the indigenous population of the Pyrenean peninsula, Italy and Sicily, the other the indigenous population of Greece and the neighboring islands. The former seems to be closer to the Hamitic, the latter closer to the Semitic division.

The descendants of the Japhetites currently speak Aryan languages for the most part. Their area of distribution was already very limited in ancient times and it was mainly Turanian elements that narrowed it down. The latter, as already mentioned, currently form the numerically most important element of the population of Europe, even if we disregard the non-Aryan Turanians, the Ugric-Finnish peoples and the Turks. They form the main part of the population in all the Slav countries, in Rumania, in the German provinces of Austria, in Southern Germany, in Switzerland, in Northern Italy and France, but are also an essential element of the population of Greece, Central Italy, northern Germany, Belgium, Great Britain and Ireland. There is no country in Europe where they are not represented by at least a few percent.

The causes which brought about the numerical preponderance of the Turkic element in Central Europe have already been discussed in the third section (p. 51).

It is now incumbent upon me to provide some information on the population ratios of the countries mentioned above, from which the correctness of the above statement can be seen,

More detailed data on the wide distribution of brachycephals in northern Italy have already been given on p. 95 based on the results of Calori's investigations. The Slavs¹) as well as the Romanians²) are known as typical brachycephals. Particularly surprising is the extraordinarily large distribution of these in Switzerland, southern Germany and France, countries whose populations once consisted largely of blond, dolichocephalic Aryans (Germanic tribes, Gauls), the latter of which currently make up only a very small fraction of the population. Huxley estimates the number of brachycephals in Switzerland at $\frac{1}{2}$ of the total population and constates the very frequent occurrence of brachystocephals there with a latitudinal index of 85 and above. According to the same author, 85% of the population of southwest Germany is brachycephalic, 36% brachystocephalic and only 15% dolichocephalic. In contrast, the central German population is said to consist of 60% brachycephals and 40% dolichocephals. With regard to the ancient Bavarian population, Johannes Ranke came to the following conclusions:³) "After measurements on 1000 skulls randomly mixed according to sex. This index is the

same as that determined by Mr. Ecker on 200 skulls from the population of the Baden Oberland, which were also mixed according to sex; he found an average of 83.5. The inhabitants of the Swabian Unterland appear somewhat less short-headed, for whom Mr. von Holder obtained an average ' length-width index of 81.7. Among the 1000 ancient Bavarian skulls measured, the length-width index fluctuated between the two extremes of 70.3 - 97.6.

- Among the 1000 skulls measured, there were 8 dolichocephals with a length-width index below 75.6. The number of mesocephals with an index between 75 and 79.9 was 161. The majority of the 1000 skulls, namely 831, proved to be brachycephalic with an index between 80.0 and 97.6.

*) According to Weicker, the latitude index for the Serbs, Little Russians and .Poles 79, for Romanians, Great Russians and Ruthenians 80, for Slovenes and Slovaks 81, for Croats and Czechs 82. Weisbach, who uses a different method of measurement, gives higher figures.

²⁾ Diefenbach, Völkerkunde Osteuropa's. I. 266.

³⁾ Correspondenz-Blatt der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte. 1877, p. 145; Beiträge zur Anthropologie und Urgeschichte Bayerns. III. 108.

Thus, in Old Bavaria, for every 100 brachycephals in the rural population, there are 19 mesocephals and 1 dolichocephalic." It should also be noted that, according to Ranke's surveys, the brachycephals in Bavaria increase from north to south and that the reverse ratio applies to the dolichocephals. The Tyroleans (Oetzthaler, Schnalsen- thaler, Innthaler) are closely related to the old Bavarian rural population. The measurements carried out by Dr. Tappeiner, Dr. Rabl-Rückhard and J. Ranke on their skulls have also shown that these valleys are inhabited almost exclusively by an enormously brachycephalic population. Accordingly, it appears that the German Tyroleans outnumber the typical brachycephals among the Aryan peoples - the Slavs - and among these even the most brachycephalic Czechs and Croats.

As far as the population conditions of Württemberg are concerned, H. von Hölder's investigations have also proven the existence of a brachycephalic population stratum. He distinguishes between a Turanian and a Sarmatian type in contrast to the Germanic type, and also assumes many mixed forms. The Brachycephali, with their predominantly dark eyes and dark hair, are decidedly in the majority in the Kremsthal, in the Black Forest, in the Danube valley, in the vicinity of Lake Constance and on the eastern part of the Alb, while predominantly Germanic populations are found in Lower Swabia, in the Baar, at the foot of the Alb as far as Rottweil and from there to Gmünd, and then also in the Franconian region.

With regard to Baden, Ecker remarks:^x) "The skulls of today's inhabitants of our country are, as the measurements show, short, broad and rather high, of

course to varying degrees. The forehead is usually well developed; the temporal surfaces are domed, giving the *norma frontalis* and *occipitalis* a characteristic shape that differs greatly from that of the row graves. The occiput is short, sloping rather steeply from the crown, often already from the middle of the parietal bones; sometimes it is completely flat, flattened, sometimes more flatly domed." - It is very noteworthy that Ecker finds only one skull shape in the Black Forest, even if different

*) Ecker, *Crania Germaniae meridionalis occidentalis* 83 Colorit. It is evident from this that the Aryan coloring is preserved longer in mixtures than the Aryan skull form, just as Huxley is known to have found that in ethnological classification the color of the skin and hair is on the whole of greater importance than the osteological peculiarities, inasmuch as the former give characters of primary, the latter characters of secondary importance.

Alsace-Lorraine also has an eminently brachycephalic population and the latitude index for the same is 82.93 according to Broca. Only 18% have a light complexion, so the country is even behind Bavaria (with 20%) and is at the bottom of all the German states in terms of the percentage of the population with a light complexion, a fact that explains the sympathies of the Alsace-Lorraine people for France far more than any other factor, as they are anthropologically closer to its inhabitants than to the North Germans and the anthropological aspect is far more important than the linguistic-ethnic aspect.

Roget de Belloguet, who was highly deserving of his fatherland's ethnology, sketches the following picture of the present population of France: "Pris en mässe, nous sommes un peuple brun ou châ- tain, aux yeux variant du noir au brun clair, d'une taille plutôt au dessous de la moyenne qu'au dessus, peu chargö d'embonpoint et d'un temperament fort peu lymphatique. Our members are small, our muscular strength is mediocre, but our constitution is energetic; we support the hardest work and are as good at the rigors of the winter and the hardships of the summer as we are at long fatigues and priva- tions. We have retained the fury of the attack, but with more agility in our movements and solidarity in our fight. E n f i n o u s tetes are more round than oval and our traits are arron- dis, according to Desmoulins. On voit que, s außer sur un seul point, nous sommes en tout l'opposö de l'ancien type gaulois." By measuring 384 skulls of Parisians from the 12th to the 19th century, Broca determined a mean latitudinal index of 79.45 for them. However, the Savoyards with a width index of 83.63 and the Auvergne with an index of 84.07 (according to Broca) are the purest examples of the brachycephalic type.

¹) Roget de Belloguet, *Ethnogenie gauloise*. II. 198.

While France experienced an increase in the Aryan element in historical times due to the immigration of Germanic tribes¹), the brachycephalic element in northern and central Germany also experienced a significant increase in historical times. This happened through Slavic immigration. It is certain that around the 6th century the eastern part of Holstein, Oldenburg, Lauenburg, Mecklenburg, Pomerania, the northern part of the Mark, the south-eastern part of Hanover, the Altmark, a large part of the province of Saxony, Altenburg, a part of the Reussian lands, Upper Franconia, the Main valley as far as Würzburg, in particular the area around Bamberg, a large part of Middle Franconia, Lusatia and Silesia were inhabited by Slavs²), just as around the same time the German-Austrian lands (Lower and Upper Austria, Styria, Carinthia, Carniola, the Puster Valley in Tyrol) also had an exclusively Slavic population, whose memory still lives on today in a large number of Slavic place, mountain and river names, just as it does in northern and central Germany. The Slavic population was for the most part Germanized and it is to these Germanized Slavs that we can primarily attribute the brachycephalic population element present in northern Germany.

It has already been noted earlier that the Turanian element pushed the Cro-Magnons southwards. The question now arises as to whether the latter might not have been subjugated and Turanized by the Turanians in the same way that the latter were later subjugated and Aryanized by the Aryans. This question is so important because it is closely related to the question of the anthropological-linguistic position of the Basques and Etruscans.

The Basques are not known to have a uniform type. According to Broca's studies, the Spanish Basques are predominantly dolichocephalic (the mean latitudinal index of the inhabitants of Zarautz in Guipuzcoa is 77.62), while the French are to a large extent dolichocephalic.

¹) Even today, in the departments of Doubs, Jura and Côte-d'Or, which were once inhabited by the Burgundians, there are very few cases of military unfitness due to lack of the prescribed height.

²) Kollmann in Archiv für Anthropologie. XIII. 111.

The Basques are brachycephalic (37.36%) (the average latitudinal index of the inhabitants of Saint-Jean-de-Luz is 80.25). This already shows that the Basques can by no means be considered an unmixed people, but that they are a mixed people,^x) as Pruner-Bey and A. d'Abbadie, himself a Basque by birth, expressly declare. There is no doubt that the dolichocephalic Basque type goes back to the fossil Cro-Magnon type, i.e. that they belong to the large Jah-Phetite-Hamitic-Semitic group of peoples, while the brachycephalic Basques are descendants of the Turanians who spread throughout France

at an early stage.²⁾ Now it is easy to imagine that these Turanians gained control over a part of the Iberians and that this part adopted the language of their masters. This assumption is supported by the fact that, in the opinion of van Eys\, one of the most excellent experts on the Basque language, it is not possible to explain Iberian from Basque ("que le basque n'explique pas l'iberien")³⁾), just as he also proved the untenability of some explanations of Iberian place names from Basque that W. v. Humboldt put forward. The same conclusion was reached by Vinson, who also found that the Iberian coin legends do not fit in with the Basque language and rather point to another foreign people in Spain.⁴⁾ This would easily explain why the Basques, the majority of whom are by no means of the Turanian type, speak a language that is explained by very important experts on Basque (Euskara) as an ancient Altaic language. Sayce comments on this difficult question as follows:⁵⁾ "With this family (Turanian) I believe that Basque must also be grouped. Prince Lucien Bonaparte, Charencey, and others have shown that this interesting language closely agrees with Ugric in grammar, structure, numerals, and pro-

¹⁾ This is also supported by what Strabo (III. 1, 6) says about the writing and language of the Iberians: *xal ot aXXöt' lßrjp£*; (äusser den Turdetanern und [oder] Turdulern) ■" ^pwtai Tpapp-aTiziJ ou p.ta ö'iöea, ouoe pcp TXWTIT] p.t£.

²⁾ Cf. Pruner-Bey in *Bull. de la Societe d'anthropologie de Paris*, ser. II. 24.

³⁾ *Revue de linguistique et de philologie comparee*. 7. juillet 1874, p. 5.

⁴⁾ *La Republique Fran^aise*. Vendredi 14. aout 1874.

⁵⁾ Sayce, *The principles of comparative philology*. London 1875, p. 21. nouns. Indeed, the more I examine the question, the nearer does the relationship appear to be more especially when the newly-revealed Accadian language of ancient Babylonia, by far the oldest specimen of the Turanian family that we possess, is brought in to use for the purpose of comparison. M. Antoine d'Abbadie, in *d'Abbadie et Chaho's "foudes Grammaticales sur la Langue euskarienne"* (pp. 17, 18), has pointed out as far back as 1836 the resemblances that exist between Basque on the one. hand, and Magyar and Lapp on the other."

This assumption is confirmed by a passage from Sulpicius Severus.¹⁾ There it says: "Sed cum cogito me hominem Gallicum inter Aquitanos verba facturum, vercor ne offendat vestras nimium urbanas aures sermo rusticior . . . Tu vero, inquit Postumianus, vel Celtice aut si mavis, Gallice loquere, dummodo Martinum loquaris." Gallice and Celtice stand in contrast to the *lingua launa* and denote the two pre-Roman languages spoken in Gaul, one of which was the language of the Aryan conquerors (the Gauls), the other the language of the Turanian subjects (the Celts = the "dark ones", cf. the later explanations). It follows from this passage, firstly, that the language of the Celts had still been preserved in Gaul at the time of Sulpicius Severus and, secondly, that the indigenous Iberian population living there in Aquitaine had been Celticized, i.e.

Turanized. If they had still spoken Iberian, Postumianus would certainly have said "Iberice" instead of "Celtice". Diefenbach is wrong when he assumes that "Celtice" means Gallic and "Gallice" "the Latin spoken in most parts of Gaul at that time or Romanzo in contrast to the sermo urbanus of the early Romanized provincials".²⁾

If the relationship of Basque to one of the ancient Altaic languages has not yet been proven to the point of full evidence, and perhaps never will be, it should be borne in mind that languages which are adopted by a foreign people generally undergo profound changes in phonetic and morphological terms, which make it necessary to reconstruct the basic linguistic forms in the absence of older literary sources.

Sulpicius Severus, Dial. I. 27 ed. Halm.

²⁾ Diefenbach, Origines Europaeae 430.

works - and these are lacking in Basque - is almost impossible.

The situation is similar with the Etruscans. Craniological studies also show that the Etruscans were a mixed race. According to Baer, R. Wagner and Pruner-Bey, their skull is dolichocephalic; A. Retzius, Lagneau and Vogt, on the other hand, have declared the Etruscans to be brachycephalic. In fact, there are also dolichocephalic and brachycephalic skulls. According to Nicolucci, brachycephals made up the smaller proportion of the population, namely 37%, and according to Zanetti only 23%. If Pruner-Bey declares the dolichocephalic Etruscans to be Semites and Zanetti has found them to be related to the Egyptians,¹⁾ I can find nothing at all striking in this, but can only* see in it a further confirmation of the assumption described above that the Italic native population formed a race with the Semites and Hamites. On the other hand, I find in the statement that Deecke made at the archaeological society in Berlin at Easter 1876 that he was looking for the relatives of the Etruscans as far as Siberia,²⁾ in view of certain analogies with the Finnish languages that he himself asserted in his "Etruskische Forschungen" and on the basis of the undisputed fact, that the Etruscans are related to the Rhaetian population in the north of Italy (in Graubünden and Tyrol)³⁾ and that this population must in any case be counted among the Turanian race due to their eminent brachycephaly and their other physical habitus,⁴⁾ is nothing so surprising.

¹⁾ For more detailed evidence, see Fligier, Zur praehistorischen Ethnologie Italiens 43.

²⁾ O. Müller-Deecke, The Etruscans. Stuttgart 1877. I. Preface IX.

³⁾ Steub, Zur rätischen Ethnologie. Stuttgart 1854, where it is historically and linguistically proven that the Rhaetians were Etruscans. However, the Etruscans did not migrate from northern Italy to Tyrol and Switzerland, as has been assumed, but the migration took place in the opposite direction, from north to south. Of the ancient testimonies, that of Justin is particularly noteworthy. XX. 5: "Alpinis quoque ea gentibus

haud dubie origo est (abEtruscis), maxime Raetis, quos loca, ipsa efferarunt, ne quid ex antiquo, praeter sonum linguae, nec eum incorruptum, retinerent."

4) Diefenbach, *Origines Europaeae* 109 remarks on the phys. Habitus of the Etruscans: "To the Romans, the Etruscans appeared as "obesi et pingues," which may initially be due to their lifestyle, but to some extent through the figures <les than it may appear to some at first glance, especially since all attempts to prove the language of the Etruscans as a Semitic (Stöckel) or Aryan, or Italic, are to be regarded as decidedly unsuccessful. This applies not only to Corssen's attempt, but also to the recent attempt by Deecke himself to declare Etruscan to be an Italic language. x) Incidentally, even before Deecke, Isaac Taylor in his "Etruscan Researches" (1871) had attempted to link Etruscan with the Ural-Altaic languages. In this question, too, only the future will bring a definite decision.

It is no coincidence that on the third southern European peninsula, the Balkan Peninsula, a similar problem awaits a final solution. Here, too, Semitic and Turanian elements had to clash and, as a result, conditions similar to those that developed on the Pyrenean and Apennine peninsulas were able to develop. The question of the genealogical relationship of the Albanian, which is the first thing to be considered here, is still a completely open one, and what has become known about the shape of the Albanian skull through Virchow is based on material that is too meagre to attempt an anthropological classification of the Albanians. If they really belonged to the brachycephalic type, as one might be inclined to assume from the few skulls that have been measured, this circumstance would probably be suitable to justify the great misgivings that have arisen.

of the sculptures is confirmed. These often show small, stocky stature, the arms and nose short and thick, the face large, its contours round and long, the chin strong and somewhat protruding, the eyes large." These are traits that belong neither to the Semitic nor the Aryan race, but to the Turanian race (cf. the following) and which are still frequently found in their purest form in the territory of ancient Raetia.

*) Deecke, *Etruskische Forschungen und Studien*. Second volume. Cf. the decisive condemnation of the co-editor of this anthology, Paulfs, in *Lit. Centralblatt*. 1882, No. 22, p. 745. As is well known, Deecke also spoke out against Corssen's similar view of the Aryan character of the Etruscan language with the same determination. If it really were an Aryan language, the convincing evidence for this would have been provided long ago in the same way as for Oscian and Umbrian - to strengthen the case against the inclusion of Albanian among the Aryan languages.

In view of the great importance which the Turanian element attained in antiquity, and even more so in more recent times in Europe, it seems necessary to follow with a brief description of the physical and mental characteristics of the Turanian race"

As far as their physical type is concerned, it differs considerably from both the Semitic and the Aryan. The stature is smaller than that of the Aryans, especially in women, and there is usually a tendency to become fat, so that the figure appears puffy.

The shape of the skull is brachycephalic, the face is round with particularly pronounced development of the upper parts. The eyes are small and black in color, the eye sockets are not deep, the eyelids appear too crookedly cut towards the nose, as the inner corners of these open only imperfectly.¹) The eyebrows are narrow, black and not very arched. The cheekbones are high and protruding. The nose sits broadly on the forehead and is almost level with the face at the root; at the outermost end it is broad and flat. The chin is short, the ears large and slightly protruding from the head. The hair on the head is simple, coarse and shiny black. The beard is poorly developed, thin and black in color; it usually grows only around the lips and the lower parts of the chin. Cheek beards are something unheard of within the Turanian race. The color of the skin is white with a tinge of yellow or brown, in the southern regions even blackish. Müller, from whom I have taken this description of the physical type, concludes with the following words:²) "On the whole, the Mongolian type gives the impression of being childlike, open, carefree and sociable. All these traits are significantly enhanced by the lack of or weak beard growth, which gives the man a feminine type. In fact, where loose clothing is worn, it is often difficult to distinguish male and female faces at once."⁹¹

This type is found in its original purity particularly numerous in all those countries of Europe - with the exception of the areas inhabited by Ugro-Finns and Turks, of course - whose original Turanian population did not receive the language it currently speaks from actual Aryans, but only second-hand from some Aryanized people; This is particularly the case in the Alpine countries, whose inhabitants only gave up their own language at a relatively late date and learned some Romance or Germanic language instead, as well as in all those now Slavic countries that were only later colonized by Slavs, and where the latter then amalgamated with the Ugric-Finnish indigenous population that may have been found. Otherwise it has undergone various modifications as a result of greater or lesser admixture of Aryan blood, especially in the coloring of the hair and eyes, less so in the anatomical structure of the skeleton, which has shown itself to be more resistant to Aryan influences.

As far as the psychological character of the Turanians is concerned, it also appears to be different from that of the Aryans and Semites. They lack the powerful energy of will, the initiative of action, the strongly developed sense of independence and the deep-rooted sense of personality that is so characteristic of the peoples of the Aryan and Semitic races, especially the former.^x) They also lack the invigorating and warming imagination that has created those magnificent works of art among the Aryans and Semites that are still the object of our admiration today.

91 This characteristic is not found among all Turanian peoples,

²) Fr. Müller, *Allgemeine Ethnographie* 412. Cf. also Prichard-Wagner, *Naturgeschichte des Menschengeschlechtes*. I. Leipzig 1840, p. 312*

*) Count Gobineau, who recognized 30 years ago that among all the Aryan peoples the Germanic peoples still represent the Aryan archetype in the purest form, characterizes the Aryans in his "Essai sur l'inegalite des races humaines." IV. Paris 1855, p. 36 in the following manner: "L' Arian est donc superieur aux autres hommes, principalement dans la mesure de son intelligence et de son energie . . . Une des premieres considerations aux quelles l'aspect du monde. germanique donne lieu, c'est encore celle-ci, que l'homme y est tout et la nation peu de chose. On y aper^oit l'individu avant de voir la masse associee, circonstance fondamentale, qui excitera d'all the more l'interet qu'on prendra plus de soin de la comparer avec le spectacle offert par les agregations de metis semitiques, Helleniques, romains, kymris et slaves. Là on ne voit presque que les multitudes; l'homme ne compte pour rien et il s'efface d'autant plus que le mdlange ethnique auquel he appartient etant plus complique, la confusion est devenue plus considerable."

I

form. The Turanian, on the other hand, is passive and phlegmatic and, as a result, strictly conservative in his entire way of thinking and viewing things and averse to innovation. He adapts easily and willingly to the conditions of social and state organization and the state organizations of the peoples of this race, such as the Chinese empire, in particular, have often had a surprisingly long duration and have weathered external and internal storms that would have destroyed other states without causing any serious damage. States of the colossal size found among Turanian peoples would have been quite unthinkable with a population of purely Aryan or Semitic origin. In contrast to the Aryans and Semites, the Turanian appears to be a distinctly emotional person and his poems (Finns, Turks) also provide the best evidence of the great intimacy and depth of his emotional life. This is related to the fact that he also appears peaceful and friendly in his personal dealings. Likewise, his religious sentiments are full of depth and truth. Disinclined to fight, he is brave and persevering in war, and cruel against the enemy. What characterizes him in particular, however, is his eminently practical and sober mind, which is always directed towards the goal, as well as his strictly realistic view of the world and people in general, qualities that have their roots in the predominance of intellectual activity and the lack of imagination. From this school of thought sprang those two powerful, specifically Turanian cultural developments in Asia - the Chinese and the Sumerian-Akkadian - which are unique in their kind and of which the latter in particular has become of the greatest importance for the entire cultural development of Asia and Europe.

"These Akkadians," remarks Sayce,¹) "have played a most important role in the intellectual history of mankind, and it was they who brought the first civilization to Western Asia. We can trace back to them the arts and sciences, the religious traditions and the philosophy not only of the Assyrians, but also of the Phoenicians and Arameans, and even of the Hebrews. The seeds of Greek art and many a figure of the Greek gods and goddesses came from Chaldea.

Sayce, *Babylonische Literatur*, German by Friederici, p. 7. Lenormant, *Die Anfänge der Cultur*. I. 73.

and the world of heroes. Column construction reached its first and highest development in Babylonia, the lions that still guard the main entrance to Mycenae today are definitely of Assyrian origin, and the Greek Heracles with his twelve labors finds his model in the hero (Izdubar) of the great Chaldean epic. It is indeed difficult to say how much of our present-day culture we do not owe to the stocky people with the long-slit eyes of ancient Babylonia. Jerusalem and Athens are the holy places of our modern life and both have been deeply influenced by the ideas that originated in ancient Akkad. The Semite was always a tradesman and mediator and his earliest business was trading in spiritual⁹² commodities. Babylonia was the home and mother of Semitic culture and Semitic inspiration. The Phoenicians never forgot that they were a colony from the Persian Gulf and the Israelite reported that his ancestor Abraham was born in Ur of the Chaldeans."

As is well known, America also has two independent cultural centers in Mexico and Peru. According to A. Retzius¹), it was precisely the brachycephalic elements of the American indigenous population (the "American Mongols") who founded the culture that flourished there, just as Peschei considers the entire American indigenous population to belong to the Turanian race. We thus see that no less than four independent cultural creations (in China, Babylonia, Mexico and Peru) originated from Turanian peoples, a fact which in any case bears full testimony to the eminent intellectual capacity of the entire race.

In view of this fact, and if we further consider that a people of the Semitic race - the Egyptians - also produced a culture of their own, it is striking that we* nowhere find a trace of the Aryans having reached a higher cultural stage before their separation, which could be compared with the culture of the Egyptians or Akkadians. Indeed, we know that the Germanic tribes, i.e. those who left their Aryan homeland the latest, still entered the scene of history as half barbarians, and at a time when other peoples had already climbed to a high cultural level. This fact is all the more striking as the later achievements of the Aryans make them appear as a highly gifted and energetic race. This curious fact, however, is immediately explained when one considers the conditions under which a culture is formed in the first place. "Not on every patch of land suitable for farming," says Fr. Müller¹), "can a higher culture develop. There are only a few large plains, protected by masses of mountains and intersected by important rivers, or favorably situated islands, on which men can gather into larger societies and, in mutual intercourse with each other, independently produce the elements of culture. And there are not many of these on the whole inhabited earth." Müller finds only about seven regions that unite the conditions for the independent development of a higher culture: China, India, Mesopotamia, Egypt, the sea coasts and islands of the Near

East with the opposite peninsulas and islands of Europe, Mexico and Peru. This does not include Scandinavia, the homeland of the Aryans. There is also another factor. History shows that any higher education is only possible on the basis of slavery. This was the case in ancient Rome and Greece and in all other ancient civilized countries. We know that Aryans, Semites and Turanians found a settled population almost everywhere they penetrated, which, if it had not been destroyed or displaced, was forced into slavery by the superior conquerors. It was different in Scandinavia. Here the Aryans were the first inhabitants and were therefore forced to provide for their own physical needs. Under such circumstances, the cultivation of education could not be considered. It would therefore be wrong to draw a conclusion from the fact that the Aryans did not achieve a higher cultural development in the protoethnic period that they were less intellectually gifted, just as it would be wrong to doubt the intellectual ability of the race as such on the basis of the fact that several Turanian peoples remained at a low cultural level as a result of unfavorable external conditions.

If we classify today's European peoples according to anthropological aspects and classify them on the basis of these

¹) Fr. Müller, Allgemeine Ethnographie 67.

Penka, Origines Ariacae.

classification, it follows that neither the ethnic nor the political boundaries coincide with the boundaries of the anthropological provinces that we thus obtain. Some ethno-political units unite in themselves the greatest anthropological contrasts; conversely, some political communities, despite their ethnic diversity, show a uniform character in anthropological terms. Thus Italy, a political and national unitary state, has a population in its northern provinces that is quite different in race from the population of Lower Italy and Sicily. The words of Ratzel¹) apply to Italy in particular: "Commonality of language, of faith, of customs, of views, above all that which is called national or popular consciousness, these are all but garments which are thrown over the most diverse in a disguising and equalizing manner." However, despite the uniform garb, the attentive observer can immediately recognize these differences. The same applies to Germany, the southern parts of which are inhabited by a population that forms an anthropological contrast to the population of the northern, especially north-western parts, where the Germanic type has been preserved in a fairly pure form, but which can easily be united with the Romance population of Switzerland, northern Italy and France, as well as with the German, Slavic Romanian and Ugrian-Finnish population of the European East, to form an anthropological group characterized by the predominance of the Turanian type. Conversely, the

four-language Switzerland (German, French, Italian, Ladin) shows, on the whole, a uniform type, as does the polyglot Austro-Hungarian monarchy, if one disregards the Jews, the Armenians, who are related to them by descent and are few in number, and the Gypsies. Dr. Weisbach, who has carried out the most detailed studies on the physical habitus of the Austrian peoples, gives the following latitudinal indices²): Romanians 80.6, Germans 81.1, Magyars 81.9, Italians 82.2, Slovenes 83.8, Ruthenians 82.9, Croats 82.9, Poles 83.5, Bohemians 83.6, Slovaks 83.6. It can be seen from this that all these peoples (all brachycephalic) are anthropologically very close to each other and that it is only the great

⁹ Ratzel, *Anthropo-Geography*. Stuttgart 1882, 8. 468.

²) Wiener Medicinische Jahrbücher. 1864. II. 124.

Differences in their cultural development as well as ethnic differences based on language and custom, which make the layman, who is less attentive to the characteristic physical features, inclined to infer an anthropological difference from the cultural-ethnic difference.

Thus, while the boundaries of anthropological provinces by no means coincide with the boundaries of ethnic groups and political communities, a fact which is fully explained by the history of European races and peoples, it is curious to note that the areas of distribution of the two forms of Christian doctrine spread over almost the whole of Europe - Roman and Greek Catholicism and Protestantism - almost coincide with the areas of distribution of the Turanian type on the one hand and the Germanic-Aryan type on the other.

That the connection between the racial character and the national form of religious belief is far more intimate than that between the national form of language and the racial character is shown by the example of the Jews, who throughout Europe have given up their national language and adopted the language of the country in which they happen to live, yet cling to their religion with great tenacity. That Christianity in its innermost essence was not congenial to the true Aryan with his cheerful view of life, his arrogant nature, his lust for battle, is best proved by the fact that the Christianization of many Germanic tribes took place relatively late, had to be brought about in part by the use of force and was only possible at all through far-reaching concessions to their old national customs and views. German Protestantism itself was nothing more than a sudden reaction of the Germanic-Aryan people's spirit against a religion that had never found its way into the innermost thoughts and views of the Germanic peoples who had remained unmixed. The fact that most German princes placed themselves at the head of the Protestant movement can also be explained by the endeavor to assert the old national claims of the nobility to the leading role in the leadership of the people against the priesthood, which had become powerful. And this is why Protestantism immediately rejected all claims to 8*

From the beginning, Protestantism quickly and easily found its way into those countries that were predominantly inhabited by Germanic tribes that had remained unmixed (northern and central Germany, Denmark, the Scandinavian countries, Holland, Great Britain) and either only spread temporarily or not at all in countries whose populations were made up of other racial elements. Protestant propaganda has not been able to gain large numbers of followers in these countries, just as Catholic propaganda has not been able to achieve any significant success in purely Protestant countries. On the other hand, in all those countries in which the short-headed, dark-haired population is predominant, Catholicism has so far maintained its ground without great difficulty, despite the fact that some of them have repeatedly had to endure the most profound political and social upheavals, proof that Christianity in its Catholic form is closer to the way of thinking and seeing of the Turanian race

than

that of the Germanic-Aryan race, as well as the one often associated with Buddhism, which touches on Christianity, has won countless followers among the Turanian peoples of Asia.

But the third European race, the Semitic race, which is still relatively the purest of all

countries of Europe in Sicily and Spain - from the Caucasian peoples and the Jews - did not behave indifferently towards Christianity. It is no coincidence that it was precisely in Spain that Catholicism assumed that character of intolerance and fanaticism which is quite alien to Christianity as such and in which we have to see nothing other than the reflex of that religious and political intolerance which is so characteristic of the peoples of the Semitic race. Peschei has aptly judged this:⁹³) "If Christianity is blamed for its persecutions of heretics, its inquisitions, its religious wars, its intolerance in general, the accusations only apply to those who turned the teachings of leniency into their opposite." From this we can see the importance of the racial character itself in the face of the powerful influence of religion.

The fact that the contrast between the races cannot be overcome by ethnic unity, as it is initially expressed in the commonality of language,^x) follows from the simple fact that the racial characteristics present themselves as something unchangeable, whereas the ethnic aspects, namely language and customs, are easily subject to change. History, especially German history, provides numerous confirmations of this proposition. In this case, however, these racial contrasts do not appear in pure form, but in the form of social, political and religious contrasts: in the form of social and political contrasts for the simple reason that the denationalization of a non-racial people is usually preceded by the social and political subjugation of another people, but in the form of religious contrasts because religion and race are in a certain connection with each other. I recall the struggle of the

93) Peschei, Völkerkunde 315.

guilds against the dominant position of the patricians in the German cities throughout the Middle Ages, the struggle of the peasants and burghers against the nobility, the great religious wars that tore Germany apart for two centuries, and the particularist endeavors of this century. In each case it is easy to show that the opposing parties were not only different in social or political terms or in terms of religious creed, but also, at least in the majority of cases, in terms of race.

¹⁾ Irrespective of this, for more than 20 years the endeavor to form state communities on a purely ethnic basis or, in other words, to unite political borders with ethnic borders has been evident in the great politics of Europe. The impetus for this did not come from men of strict science, as should be noted, but from practical statesmen who found in the principle of nationality a powerful means of political agitation. The new science of anthropology had to deny the justification of these aspirations. "Toute repartition politique fondee sur Vethnologie est absurde" says de Quatrefages in Bull. de la Societe d'anthropologie de Paris. 2. ser. VI. 183. Virchow and Hovelacque have also expressed themselves in the same sense. Cf. the latter's "Langues, races, nationalites." Paris, 1875, p. 22. It is, by the way, characteristic of the history of political theories that the theory of nationalities, which first received the stamp of official-practical importance in France through Napoleon III, is at present most resolutely opposed in France.

The collapse of the social-political order founded by the Aryan-Germanic element in Central Europe took place with greater or lesser upheavals at the end of the last century and in the course of the present century. It has already been stated that it was climatic causes which gradually gave the brachycephalic element numerical predominance, especially in France and southern Germany, so that the representatives of the old order, who had sunk to a small minority, could no longer maintain it. In addition, there was another no less important circumstance. Since the discovery of America and the opening up of new sea routes, the stream of Aryan emigration, which had hitherto flooded continental Europe and Great Britain together with Ireland at certain intervals, went from Scandinavia and the area of distribution of the Aryans adjacent to Scandinavia to the newly discovered overseas countries, which are at present being subjected to Aryan influence in the same way as was formerly the case with Europe. Here, too, the climate appears to be the most powerful obstacle to Aryan expansion, inasmuch as countries with subtropical climates pose extraordinary difficulties for the settlement of unmixed Aryans.

As a result of this diversion of the stream of Aryan emigrants, Central Europe has been spared an Aryan invasion since the beginning of modern times, if we disregard the episode of the Swedish war in the 17th century, and this circumstance had the consequence that the Aryan element, which did not receive an increase from any side, declined more and more for the reasons already mentioned, and that the Turanian element, which at that time was in bondage, was able to carry out its emancipation efforts with ever greater success. Therein lies primarily the world-historical significance of the discovery of America for Europe, and it can be asserted

with certainty that without this event the ethnological and political conditions in Europe would present a different picture than they do against.

It is still the case today. For the causes which almost 5000 years ago determined the Aryans to leave their Scandinavian homeland and cross over to continental Europe still continue to have an undiminished effect today: it is the ever-increasing difficulty of feeding themselves and raising a family there.

What applies to the Scandinavian mother country also applies to Denmark and Great Britain.

)^x

Nevertheless, we see that the Aryan element, even if in modern times it no longer has the importance in Central and Southern Europe that it had in early and late antiquity and in the Middle Ages, still occupies a respectable position in this part of the world and that only it and the Turanian element determine its destiny. Only its name and the scene of its activity have changed: the power that once conquered almost all of Europe and part of Asia and even terrified mighty Egypt has remained the same and will remain the same as long as the Aryans are granted a suitable climate and the struggle for existence makes the exertion of all their powers a necessity and thus prevents their decay. For only by the same means by which their physical and spiritual superiority was acquired can it be maintained.

The purpose of these remarks was to emphasize the importance of the anthropological aspect as opposed to the purely ethnic, personal and geographical aspects, which have been the sole determinants of the previous conception of history. The races are precisely the permanent element in the change of events, the

¹) This assumption is also confirmed by historical evidence. It is said of the Normans that, because of the excessive number of his children, the single father drove his adult sons away from him, except for one, whom he kept as his heir. It is said in Guil. Gerne t., Hist. Normadnor. 4: "Quae gens idcirco sic multiplicabatur, quoniam nimium de- dita luxui mulieribus iungebatur multis. Nam pater adultos filios a se pellebat, praeter unum, quem heredem iuris sui relinquebat." This made it necessary for the emigrants to turn to other peoples. Paulus Diaconus also reports something similar about the peoples of Scandinavia. Cf. Philipps in the Sitzungsberichte der histor.-philos. Classe der Wiener Akademie. Likewise, F. Dahn (Wie tersheim-Dahn, Geschichte der Völkerwanderung. I. Leipzig 1880, p. 8) sees the actual cause of the Germanic migration of peoples in the overpopulation, just as this Germanic migration of peoples appears to me to be a kind of continuation of the ancient Aryan movements of peoples. From this point of view, Dahn's excellent remarks "on the nature of the migration of peoples" (pp. 10-25) deserve all the more attention.

Peoples, on the other hand, are transient and it can be proven that some peoples whose physical habitus and mental character have remained unchanged have already changed their language several times. There is no point in speaking of Aryans or Indo-Europeans and leaving it to everyone to imagine them as they please, as if this fact were something completely irrelevant to historical observation. However, it is essential to keep a constant eye on the anthropological aspect, not only for historical

observation in general, but also in particular for understanding the development of language and literary history. It is not possible to understand the profound difference between Roman and Greek literature, between the Roman and Greek languages, if one does not know that an element participated to an outstanding degree in the development of the Roman people which participated very little or not at all in the development of the Greek people. I need hardly say that I am referring to the Turanian (brachycephalic) element, which had such a lasting influence on the formation of the Roman language and literature. Nor is it possible to understand the universality of German literature and art, by which it is so strikingly distinguished from the more one-sided literary and artistic endeavors of other more homogeneous peoples, if one does not know that since ancient and modern times the Aryan and Turanian elements, and since the middle of the last century also the Semitic element, each in its own way, have influenced the intellectual life of Germany. Then one understands how it was possible that every genre of poetry, every scientific discipline, every artistic problem has found its excellent workers there. This universality of intellectual endeavors is a kind of substitute for the many and serious political disadvantages that have always arisen in Germany from the anthropological diversity of its inhabitants.

The extent to which the Turanian element influenced the development of the Aryan languages in general and Germanic in particular, and the direction in which this influence made itself felt, will be shown later.

The question now arises as to where the Aryans first settled after the stream of their emigration had taken a southerly direction. This question can be answered with a fair degree of certainty by saying that they probably started in Jutland and spread out to the neighboring areas of present-day Germany, Holland, Belgium, France and England. From Germany, they continued their advance towards countries even further south (Switzerland, Italy¹). However, it is also possible that Italy received its first Aryan immigrants from France and this assumption would be supported by the fact that the Germanic Teutonic tribe is also known to have made its way to Italy via France. However, the fact that Germany had been occupied by Aryans long before the Germanic invasion is clear from the many geographical names of undoubtedly Celtic provenance. Linguistic history teaches us that the Aryans who lived in the areas mentioned above belonged together and first separated from the common Aryan stock. It is known that within the Aryan languages, Celtic and the Italic languages (Latin, Umbrian, Osciscb) form a closer unit.²) On the other hand, it can be shown that the morphological structure of the Celtic-Italic languages represents the oldest developmental base of Aryan among all the Aryan languages that has come down to us. For the widespread view that the individual Aryan languages differ from one another merely in their phonetic structure and that they show no differences in their morphological structure is decidedly incorrect, especially as far as the structure of the

verbum is concerned, and was at the same time one of the main reasons why the nature of Aryan inflection was recognized so late. Now the analysis of the Celtic-Italic verb shows several phonetically different forms in the same syntactic use (e.g. the Latin conjunctives *amem* and *legam*), which already appear in different meanings in other languages, proof that the so-called Italo-Celts first separated from the common root at a time before the inflectional principle had even recognized the phonetic difference of the two verbal forms.

An ancient Aryan settlement in Italy is Ariminum (from^x Ariaman- um = the city of the Aryans) in Umbria, now Bimini.

²) Cf. Schleicher in the *Beiträge zur vergleichenden Sprachforschung*.

1. 437 and Lottner, op. cit. II. 309.

forms for the purpose of expressing a functional difference^T).

But there is also historical evidence to support this assumption. Even in Roman times, the Gauls appeared to be less tall and fairer than the Germanic tribes and had therefore been mixed with Anarian elements for some time, which points to an earlier separation. Strabo²) notes that although both tribes were -uapairX[^]tot xal p.op<paib xal xal btotc, the Germanic tribes were jiixpov i\$akXaTT0VTe; TOJ TS TtXeovaaJAcP TTJC dyptoT[^]TOs xal TOUXAL TTP JavboT/jTO[^] Eustathios³) repeats this statement

Strabo's in a slightly different version GrXeoydCovTss p,6vov dyptOTTpt {icyeOs" TS xal cavOor/jTi). Manilius⁴) also makes the difference:

Flava per ingentes surgit Germania partus, Gallia vicino minus est infecta rubore.

It has already been discussed earlier that the name Gauls (Galli, TaXarat = blondes) was adopted for the Aryans in Gaul. In England they appear under the name Britanni, BpSTTavot, Brythön and their country under the name Britannia, BpSTravtxiq.

As the name Briten (Britones) shows, the word Britannia is a compound whose second constituent (tanne) means land, so that Britanni relates to Britones like Angeln to Engländer (from Angel-länder). The word Britones (Britons) itself, whose i, as ßpsTravtx[^] shows, goes back to an a, I trace back to a basic form *bhra-ta from^x bharta with the meaning weiss? which is first derived from the phonetically identical (l=r) lit. bal-ta-s weiss, then from the Greek cpaX-6-; <paX-6-; <paX-apo-c hell, weiss, <pop*xo-c weiss, leuchtend, lat. full-ön-Walker (whitener), fulica Blasshuhn, lett. bäl-a-s bleich, blass, altsl. bel-ii weiss, bro-nü falb, weisslich, aschfarb.)⁵

The same root bbar, bhal weiss (extended from bha by the determinative r, l) is also the basis of the name Belgians (Belgae). Concerning the cause of this naming of

these peoples as

¹⁾ Cf. Penka, Indogerm. nominal inflection 123.

²⁾ Strabo VII. 1, 2.

⁸⁾ Eustathius in his Commentary on Dionys. Per. v. 285.

⁴⁾ Manilius IV. 716.

⁵⁾ Fick, Vergl. Wörterbuch. II. 152.

"Whites", it suffices to recall what was noted earlier about the name Aryans and their physical constitution.

Thus we see that everywhere the Aryans appear to be called either white or blond according to the two most prominent physical characteristics - the white color of their skin or the blond color of their hair. This circumstance alone makes it probable in advance that the small dark population which the Aryans found everywhere on their advance in continental Europe was likewise named after the color of their skin, hair and eyes. This is indeed the case, as the etymology of the word Celt (Keltae, KsXrat, KeXrtxig) proves. As is well known, this name was used by old and new ethnologists without distinction alongside the name Gauls, so that it also appears as the name of the ruling class of the Aryans. Broca was the first to use the name Celt in the correct way, by proving that the population Caesar called Celtae was no other than the small, dark, brachycephalic population of France that is still more or less purely preserved today.¹) The word Celtae goes back to a basic form^x skalta (root form), which consists of the root skal and the suffix ta. The root skal is extended from ska by the determinative 1; ska, like ski and sku, means to cover, veil, make dark²): sanskr. kha-jā for^x skā-jā shadow, Greek azo-tdr axorstva, ὄξο-τοβαοxtov (Hesych.), crzo-zog darkness, ax7)-viq tent,

protection, a/a-o-cov cell, honeycomb, lat. ca-sa hut, cas-si-s (probably from skad-si-s) helmet, squā-mafor^x quad-ma scale; ir. skā-th shadow and so on. The root extended with the determinative! appears in the following words with the meaning dark, black: sanskr. kal-anka-s stain, kāl-a-s black, khal-ug darkness; greek xsX-atvo<, xsXat-vstp^g black, x7jX(-C stain; lat. squal-or, squalidus dirty, cāl-igo darkness; Old Sl. kal-ü lutum, and since 1 goes back to an earlier r., Old Sl. örünü (basic form^x skar-na-s) black and the lit. czar-ta-s, which is also identical in suffix to our stem^x skal-ta, Polish czart, Russ. CQr-tü, öor-tü, czech. cert devil = the black one. Identical to the name Celtae, KeXrat and even closer to the basic form of the word, since the initial sound (sk) is completely preserved, is the name SxoXotoi, known to be the native name of the Pontic Scythians¹). It also goes back to a basic form^x skal-ta (^x skar-ta) and also has the sound a (o) between the 1 of the root and the t of the suffix, which we have already encountered earlier in the name FaXazat from TaX--ai (see p. 43). These Scolotes were also of dark complexion and belonged to the same Bace to which the Celts living in Western and Central Europe belonged.

Thus we see that the small, dark, brachycephalic population of Europe, at least at two points on the globe, have been called dark, black people by the Aryans in contrast to their own light complexion.

While Celtic and the Italic languages (Latin, Umbrian, Oscian) form a closer unit than the other Aryan languages, Greek, Slavo-Lithuanian and Iranian-Indian show so many similarities, not only morphologically but also lexically²), that we must assume that the bearers of these languages lived together for a considerable time. This was probably the case in the North German Plain. It was probably from this central point that the separation into south and east took place. These later Aryans also encountered peoples of the dark, brachycephalic (Turanian) type everywhere, who, insofar as they were not pushed aside or destroyed, submitted to Aryan rule.

¹) Herod. IV. 6.

²) Cf. Johannes Schmidt, *Die Verwandtschaftsverhältnisse der indo- germ. Sprachen*. Weimar 1872, pp. 9, 21,

and adopted the language of their Aryan masters. In this way, new peoples emerged, since the ethnic reshaping was accompanied by at least a partial physical reshaping as a result of the admixture of Aryan blood. These include the now Germanized Prussian people, the Lithuanian (and Latvian) people, and the numerous Slavic people. But that these peoples, despite the greater or lesser admixture of Aryan blood, are essentially different from the unmixed Aryans both in their physical habitus and in their spiritual character, needs no further elaboration.

The Slavs have therefore long since been separated from the other Aryan peoples and brought into closer connection with the Finno-Ugric group of peoples. In fact, the Slav type is not essentially different from that of the Ugro-Finns and it is only the color of the eyes, hair and skin that distinguishes the Slavs, among whom the light complexion is often found, from the Eastern Finns, where it is known to be very rare. Incidentally, even the individual Slavic peoples differ considerably from one another in this and other respects, so that in view of this fact there can be no question of a uniform Slavic type in the strict sense of the word. According to Mainow, the Great Russians have chestnut-brown, curly hair, black eyes, long beards and blunt noses, whereas the White Russians have flaxen hair, gray or very light blue eyes, sparse beards and short, flat noses, and the Little Russians have straight black hair, black eyes and eagle noses¹). Dr. Weisbach²) found that 29% of the northern Slavs (Czechs, Slovaks, Poles, Ruthenians) had blond hair, 71% had brown shading (mostly _ dark), 70.8% had light eyes and 29.1% had dark eyes. As far as the southern Slavs (Croats, Serbs, Bulgarians) are concerned, they are far darker, as well as broader and shorter-headed than the northern Slavs.)³

^{*)} Cf. the *Archiv für Anthropologie*. VIII. 330.

²⁾ *Journal of Ethnology*. IX Suppl. 250.

³⁾ The description of the Slavs by Procopius, the first rapporteur on the Slavs, also clearly shows them to be a mixed people. He writes in Bell. Goth. III. 14: Ta 8e GüJjiaTa xat Ta? xop.a; oÖTs Xeuxot ayav, [avW etatv, OUTE TO avTot; ira'/teXtos TETpaKTat, dXX' *thw* foravce".

These differences can be explained by the fact that the Slavs are a mixed people who have been influenced not only by Aryan elements, sometimes to a greater and sometimes to a lesser extent, but also by Turanians from the Altaic language and people group (Mongols, Turks). Nevertheless, it can still be clearly seen today that their physical habitus goes back to a single basic type, which is identical with the original type of the Ugro-Finnish peoples.

The fact that the Slavs, although they speak an Aryan language, are not Aryans in the sense that the true Germanic peoples are, is shown not only by their different physical habitus and their different mental character, but also by the language itself and the historical traditions. The name itself shows that they were once subjugated by another people, and this subjugating people was in any case none other than the Aryans. The name Slav (Old Slavonic Slovenü, Slojneninü, once Slavi'ane in Miklosich, Lex., Slov. czech. SlovŮnin, Slovjanin,^x) Slovan, Greek Sxkaßijvot, Sxkaßot, S&kaß-qvoi, Latin Slavi, Slaveni, Sclavini, Sclavi, Sclavani, Arabic Siqlāb, plur. Saqālibah) in connection with slovo word (sloviti speak) or slava fame. These etymologies have only the value of folk etymologies and arose from the need to give meaning to a name that later became incomprehensible in its actual meaning by linking it to another etymologically comprehensible word. However, these etymologies were on the right track insofar as they connected the name with words that are also derived from the same root as the ethnic name itself. Old Slavonic Slovenü and^x Slojnenü go back to the basic forms^x Slav-a-n and Slav-ja-n respectively, and these forms are nothing other than participia praesentis in Nomin. Sing, from the root klu (kru) hear (cf. sanskr. zend. Qru audire, ^rav-as fame; Greek xX6-cn hear, xke-Os fame; Latin clu-o hear, hot, cli-ens listener from^x clu-ie-n-s, in-clu-tu-s fame; altir. clti. rumor, gloria, clo-th famous, clu-ni-m hear, altcymbr. clo-t gloria; lit. szlov-6 honor, klau-s-a-i hear, altsl. slu-ti nominari, therefore esse, slovo word (stem slov-es), slav-a fame²), formed with the suffixes a and ja

^{*}) Slojnenin relates to a presupposed Slojnan, like Rusin to Rus, Srbin to Serb; cf. Mordwin, Litwin, Kozarin.

⁴⁾ Curtius, Grundzüge der griech. etymologie 151.

from the root^x slau (from^x klau) extended by the prefix a¹), x similar to cliens from^x clu-ie-n-s²) (basic form^x c.lu-ja-n-s). As for the participial endings -ant, -jant in their relation to the endings -an, -at, respectively -jan, -jat, I have explained them as contamination forms originating

from the latter endings⁹⁴ and pointed out that such participia on -an and -at, -jan and -jat are still frequently encountered in the individual Aryan languages, and that especially in Old Prussian, which is so close to Slavic, forms such as *sid-a-n-s* and *-a-t-s* (sitting) are still found next to each other, but also forms such as *dil-a-nt-s* £^{95 96}).

ilt

therefore means Slovan as much as the Latin stem- and cliens (listener) and is reminiscent of the German expressions in terms of the development of meaning: *Angehöriger*, *Höriger* from the ahd. *hörjan* *audire*, goth. *hausjan* and *gahojan* *gehörchen*, *hōrsam* *gehorsam* and to the designation of the original inhabitants subjugated by the Dorians on the island of Crete as *ōk^xooi* from the root *dz* (*azouco* *hōre*). Incidentally, one should also note the following Slavic words formed from the same root: *slu-ga* and *slu-z-ka* *servus* and *ancilla*, *slu-zi-tel-ü* *famulus*, *slu-zl-ba* *servitus*, *slu-zi-ti* *ministrare*. Of course, this also explains the name Slovak (Czech *Slovák*, Polish *Slawak*). It is curious that the Magyars also call the Slovaks *Tot*, a word that is Turkish *tat* and in some North Asian dialects designates the subjugated, non-Turkish population, the autochthonous ethnic element.⁹⁶) The name *Tot* is therefore by no means to be regarded as a Magyar translation of the Slavic Slovak, but one can see from this that the socio-political dependence into which the Slavs, or Slovaks, had fallen, always found its expression in the name of the people.

The name Kroat (*Hrvat*) is explained in the same way. This word goes back to a basic form* *sru-a-t* (from* *kru-a-t*), so it also shows the suffix *a*, but instead of the *n*, which appears in Slovan, the *t* mentioned above (cf. the Old Prussian *sid-a-t-s*). The other changes are quite regular: the initial *s* became, as often in Slavic, *h*, *r* was vocalized and, conversely, *u* turned into *v*. Thus *sruat* probably developed into the currently common form *Hrvat* through the middle form* *svrat*.

The Slavs are only mentioned as such at a late stage. It can be assumed that they existed earlier because the Indian Aryans moved into the Punjab around the year 1300 BC, meaning that Aryans must have lived there before this time, where we later find the Slavs. Herodotus, the oldest Greek writer on this subject, knows of only Scythians in the regions where we expect to find Aryans and, at the same time, Aryanized peoples - Lithuanians and Slavs, who currently live there - according to the chronological finds, and it is therefore necessary to go into the complex Scythian question in more detail.

What is said about the way of life and the physical habitus of the Scythians is

94) On the nature and origin of the prelude (others call this phenomenon *gunirung* or vocal increase) see Penka, *Indogenn. Nominal inflection* 134.

¹²) Cf. Corssen, *Ueber Ansprache, Vocalismus und Betonung der latein. Language*. II Leipzig 1870, p. 740.

³) Penka, *op. cit.* 160.

95) Leskien, *Die Declination im Slavisch-Litauischen und Germanischen*. Leipzig 1876, p. 21.

96) W. Tomaschek, *Die Gothen in Taurien*. Vienna 1881, p. 5.

only found among peoples of the Turanian race, especially the Altai, so that there can be no doubt that when we hear the name Scythians we must first think of peoples of this race. This is supported by "the habituation to the equestrian life practiced from earliest youth and the related preference for the consumption of horse meat, soured horse milk (öcuyakob Kumys of today's Tartars) and horse cheese (frntavTj), the intoxication through steam baths of hemp seeds, the burning of the soft parts of the body as a remedy for rheumatic pains, the poisoning of arrowheads, and finally traits of extreme crudeness, contrary to all customs of Aryan peoples, at the funerals of princes and other religious ceremonies associated with mass human sacrifices. These traces of North Asian kinship are confirmed by what Hippocrates, a naturalist with a keener eye, tells us about the physical appearance of the Pontian Scythians, emphasizing their fundamental difference from all other peoples known to the Greeks at the time and describing as characteristic features of their yellowish skin color (rcoppov), namely obesity, beardlessness and therefore unmanly figure,^a) traits that are known to be found in such sharpness only within the so-called Mongolian race, while they are alien to the characteristics of the Indo-European family of peoples." ^{97 98)}

For this reason, however, I would not agree with Niebuhr⁹⁹⁾ and K. Neumann^{100 101)} that the Scythians were a Mongolian people in the strict sense of the word, at least not the main mass of the Scythians living in Europe. It must be borne in mind that the movements of Altaic peoples towards western Europe began around the 8th century BC and continued almost uninterruptedly until the late Middle Ages. These Altaic peoples inherited the Aryans in Eastern Europe and it is therefore not surprising that we learn from the life of the European Scythians that they had traits that were only found among the Altaians and not also among the Uraliim (Ugro-Finns). The actual Scythian tribal population of Europe, however, * as we can assume with the greatest probability, belonged to the Ugro-Finnish division of the Ural-Altaic group of peoples. There are several reasons for this assumption.

Let us first listen to what K. E. von Baer has to say about our question from a craniological point of view:⁰⁾ "Of all the known skulls in our collection, the Bashkir skulls are most similar in size to those of the Scythians. But which tribe do the Bashkirs belong to? Unfortunately, it has not yet been possible to agree on this. Their language is predominantly Tatar, but they are often said to be a Finnish people who have gradually adopted the Tatar language - without sufficient evidence. However, if one considers that the Tatar-speaking peoples are extremely different in their physical structure and that it is therefore impossible to draw a definite line between Tatar (or Turkic) and Finnish peoples, one is inclined to believe that

97¹⁾ Hippocrates, *De aere, aquis et locis* 91-102.

98) Kiepert, *Lehrbuch der alten Geographie* 343.

99) Niebuhr, *Kleine Schriften*. I. 262.

100) K. Neumann, *Die Hellenen im Skythenlande*. Breslau 1855.

101) *Archiv für Anthropologie*. X. 230.

in prehistoric times there were movements and mixtures of peoples, from

about which nothing is known, but about which light can perhaps be shed or at least well-founded probabilities can be developed if the contents of the graves in the vast Russian empire are rigorously scientifically investigated.

From the graves of Siberia, the Academy has some skulls whose nationality has not yet been determined, which are similar to the Scythians and which are very different from the long-headed Tartars with long faces, such as the Tartars of Kazan, the Uzbeks and the Ottomans. In particular, Mr. Maak brought back a skull from eastern Siberia that is completely similar to those of the Scythians, unfortunately without giving any details of the place where it was found. Should not, one may ask, a people have immigrated with a broad, rather low skull, which, without being Mongolian, Tatar or Finnish, mixed with these peoples and thus produced the peoples who now mostly speak Tatar, but do not have the high upper jaws like the Turkic tribes mentioned above? And are not the Scythians of the Greeks, the Chudes of the Russians and other peoples, some of whom now speak Finnish, others Tatar, descendants of these original peoples, mixed with other tribes?"

When Baer claims that the Bashkirs have been declared to be an originally Finnish, later Tatar-Syrian people without sufficient evidence, this is hardly correct. That they belong specifically to the Ugric family is clear from the fact that they are called Istaki (Eastern Yaks) by the Kyrgyz and Sari Ishtek (red-haired Eastern Yaks) by the Tatars. According to the travelers Plano Carpini and Ru- bruquis (13th year), the land of the Bashkirs (Pascatir) was called Great Hungary in the Middle Ages and their language is said to have been identical to that of the Hungarians according to the same sources.)^x

From these explanations it is at least certain that the identification of the Scythians with the Ugro-fins does not face any considerable difficulties from the point of view of craniology.

A further confirmation of this assumption lies in the name Scythian itself, which Bayer already identified with the name Chuden 100 years ago. This name (Gjudi, Gudi) refers to the

²⁾ Prichard-Wagner, *Naturgeschichte des Menschengeschlechtes*, in. 1, p. 366.

The Russians are known to have called the Finns. Since the Slavic name cannot be assumed to have been borrowed from the Greek, it follows that the Aryans already named the Ugro Finns with the form underlying both forms of the name^x Sku-dha. The meaning of the name itself will be explained later.

If we consider that the Slavs, in their physical constitution and mental characteristics, are very closely related to the Finns and that the existing differences are due to the Aryan blood

mixed with them, we are led, as it were, to look for the ancestors of today's Slavs in the large area of eastern Europe, which, according to the testimony of ancient writers, was inhabited by the Scythians. And here again we must first turn our attention to the western regions, which, as is evident from the earlier discussions, were first exposed to the Aryan invasion and are actually inhabited by Slavs at the present time, whereby we must also take into account that we have not the slightest reason to assume that these Slavs only immigrated into their present territories later from elsewhere, which is known to be the case with other Slavic tribes, e.g. the Czechs.

This assumption also proves to be correct. It follows from the following consideration. We have already discussed earlier that the subjugation of a non-tribal people must have preceded the Aryanization of that people. Now we read in Herodotus that a farming people of Scythian origin (Sxo&at dpoTrjps?¹⁰²), Sxoöat ^sojpYot^{103 104 105})) lived in the Dnjeper (Borysthenes), Bug (Hypanis) and Dnjester (Tyras) river basins and even further afield. These arable Scythians are contrasted with the nomadic Scythians (Sx6&ai vopwcSsg) between the Dnjeper and the Don (Tanaïs). If we now read further that the latter are expressly described as independent (£ke68epoi³), the conclusion follows automatically that the former were not independent either at that time or earlier. Herodotus explicitly states that they were not independent at the time of Herodotus, but were subject to tribute (SooXot¹) and that their masters were the nomadic Scythians mentioned above. But should they have taught them agriculture? This assumption is quite inconceivable, for the simple reason that the nomadic Scythians themselves did not know how to farm, but lived exclusively from cattle breeding. They must therefore have been taught agriculture by another people who knew it. And this people were the Aryans. As Herodotus himself shows, the latter only left the area to the north of Pontus around the 8th century BC. These are the Cimmerians he mentions. He tells us that North Tadisian Scythians from Asia, driven out by the Massagetes, came to their country after crossing the river Araxes and pushed the previous masters (BautXsic), who were unable to come to an agreement with the ruled people (Sr^jio?) about the measures to be taken in their perilous situation, into Asia. ²) It was from these Cimmerians that the arable Scythians had learned agriculture and adopted the Aryan language after they had been subjugated and forced to settle down.

If I see Herodotus' Slavs in the agricultural Scythians, then I am in full agreement with SafaMk,³) who also saw Slavs in them. Cuno, however, went decidedly too far in declaring the Scythians to be Slavs without any further distinction. ⁴) On the other hand, it was also wrong for Müllenhof to be tempted to declare the Scythians to be Eranians for one-sided linguistic reasons, ⁵) an assumption that is not admissible for anthropological

102¹) Herod. IV. 17.

103) Herod. IV. 18.

104⁸) Herod. IV. 110.

reasons alone.

When Herodotus was in the land of the Scythians⁶), namely in the Exampaios region, which Cuno classified as the northern or central

¹) Herod. IV. 20.

²) Herod. IV. 11.

³)Schafarik, Slávische Alterthümer. I. 271: "They (the arable Scythians) were undoubtedly of Slavic origin."

⁴) Cuno, Forschungen im Gebiet der alten Völkerkunde. I. The Scythians 90.

⁵) Monthly reports of the Berlin Academy. 1866, S. 549.

⁶) Herod. IV. 81.

Podolia,¹) he found no more genuine Aryans there. If¹ he had found any there, he would certainly have mentioned them.

done. However, numerous traces of them were still found in the

Land. Herodotus himself says:²) xal vuv sort piv Tfi Sxoötx^ Ktppipta

Tstysa, 8s Kopfi^ta Ktppipta, sarrt 8s xat X^P⁷ ! ouvopia Ktppispwp fort 8s Bos-opo; Kt|A|xsptoc xaXeo|Aevog.

But traces of their former presence can still be found today. I recall the existence of those fortified settlements (GorodischtS), which on the one hand may have served to defend the country against the attacks of the independent Scythians, and on the other as bases for their own rule over the subjugated Scythians. I would also remind you that in these regions (eastern Galicia, Podolia, Volhynia) skulls have been found in very old graves which, quite different from the skulls of the present-day population of these countries, show beyond doubt that Aryans once lived there, just as the similarity between the stone tools found there and those found in Scandinavia shows that there must once have been a movement of peoples from Scandinavia into these regions (cf. p. 68).

The Slavs enter history as an extraordinarily numerous people. The conditions must therefore have been very favorable for their multiplication and expansion. This was actually also the case under the supremacy of the Altaic Turanians (the nomadic Scythians), who had taken over their inheritance after the fall of the Aryan (Cimmerian) rule. This emerges from a passage by Strabo:³) ot o3v vop.d8ss T:oXs|j.i(JTai p.dXX6v etcnv 7] XrjOTpixot, zoXfp.oo5t 8s 6zsp twv cpopoiv. iinTps<pavTS> ydp s'xsiv Ttjv pjv TOtg d&sXooat ysmpeiv dvrl TauTiqg dyazaiai cpopoos Xapi, 3dvovTsc Tobg tmvrerappivoö; p.srptoo; Tivac, oux s; rcspioostav aXX' sfc Ta &p^p,epa xal Ta dvayxaia too BTOO. pj SLSoVTOIV 8s aÖTOtc KoXep-ooat. This expansion of the Slavs initially took place in an easterly and north-easterly direction, whereby the Ugro-Finnish tribal population they found gradually amalgamated with them. This explains why the characteristic features of the Turanian race, e.g.

⁷) Cuno, op. cit. 85.

") He rod. IV. 12.

⁸⁾ Strabo VH. 4, 6. are more prominent among the Great Russians than among the Poles, who after their Aryanization probably did not absorb any new Turanian elements in large numbers.

The subjugated Scythians were probably settled in such a way that a certain number of families were united to form a community. A certain number of families were united into a community, allocated a certain part of the land for joint cultivation and placed a man from the ruling class at the head of the community, who was responsible for supervising the cultivation of the land and receiving the stipulated taxes from the "bondmen" (Slavs). It is very likely that the Urslavic institution of the field community, which has survived in the Russian Mir to the present day, originated in this way. *) This is also evident from the etymology of the words mir and Old Slavic visi. (village). The former goes back to the root mar with the meaning to measure, to divide (Greek. |A&ip-o-|iat er. halte Antheil, p,sp-of, uep-t-s Antheil, Theil, p.ep-1-Cco theil, p.6p-o-c Loos, pioipQf gebührender Antheil, p.6p-a Abtheilung; lat. mer-e-o, mer-e- or ²)), so that mir denotes the Feldmark as the "Zügetheilte", in a similar way as the Greek. ^on Mangold is explained as "divided land". ³⁾ Visi, on the other hand, goes back to the root vi umfassen, vereinigen⁴) (cf. Old Latin visi all, ganz) and therefore originally meant nothing other than the union (cf. the German Gemeinde, Latin communio) of those who had previously lived in isolation and were now forced to live together. With this visi is formed from the same root the zend. viQ house, village, clan, lat. vfcus (veicus), goth. veiþ-s, ahd. wic dwelling place, spot. According to Justi⁵) V19 in Zend means a community of 15 men and women and according to a conjecture by Lassen⁶) sanskr. vi<? (in

^{j)} The same institution of the field community is still found in India and Ceylon and is, as J. B. Phene, The Aryan village in India and Ceylon.' London 1880, has proved to be of ancient Aryan origin.

²⁾ Curtius, Grundzüge der griech. etymologie 331.

³⁾ Curtius' Studien zur griech. und lat. grammatik.VI. 403. The root of is da theilen, zutheilen (cf. §a*(-co theile, oa*(-c Portion, sanskr. da-j to divide, dā-ja-s Antheil, Erbtheil etc.).

⁴⁾ Fick, Vergl. Wörterbuch. I. 784.

⁵⁾ Justi, Handbuch der Zendsprache. Leipzig 1864, p. 281.

⁶⁾ Lassen, Indische Alterthumskunde. I. 797.

vi^~pati) synonymous with pankagana, i.e. a union of five ' families, the first stage in the development of the community. It lies
nahe to assume that the Old Slavic visi also consists of only one'
I small number of families.

At the head of such a village stood the "village lord", naturally an Aryan, as long as Aryan rule prevailed. His old name has been preserved in Lithuanian, where v&z-pat-s now means lord at all (cf. also the Old Prussian wais-pattin, housewife) and in Zend, too, viQ-paiti is found, which is translated as village head. It is also very probable that the Sanskrit vi\$-pati, a frequent attribute of Agni, which is usually interpreted as lord of the people, had the same meaning as in the Zend, as the Petersburg dictionary actually assumes. ¹⁾ The unfree position of the village inhabitants is also evident from sanskr. vi^~a-s Unterthanen, v&i^~ja, zend. vaecj-u, husv. ve\$ Einw^T ohner, Arbeiter, Mitglied der dritten Classe. The same as vi^~pati in Sanskrit also denotes kula-pati, kula-p& (kula => skura dark, black) with the difference that with this word the bondmen are not designated as members of the community bound to the clod, but as dark ones according to their skin color.

* That the early habituation to a sedentary life and to
The fact that agriculture and the long period of servitude could not remain without influence on the mental character of the Slavs needs no further discussion. In particular, these factors must have resulted in the weakening of warlike instincts.

While the Aryans were the Slavs' teachers in agriculture, it later happened that the branch of the Aryans who entered the scene of history last, namely the Germanic tribes, went to school with the Slavs as farmers. It is known that the German name of the most important tool for farming, the plow, is a borrowing from Slavic.

As noted, Herodotus no longer saw any unmixed Aryans in the part of Scythia he traveled through. The fact that such still existed further north, however, is clear from the description he gives of the Gelonians. ¹⁰⁶⁾ His report, which is probably > initially based on the reports of Greek merchants, is in

106) Pictet, Les Origines Indo-Europeennes. III. 81.

²⁾ He.rod.IV. 108.

interesting in many respects. He reports that their city, situated in the middle of the land of the Budines, has wooden walls, wooden temples and houses, that there are temples there with images and altars of Hellenic deities, that the Gelones are descended from Hellenes who, driven from their trading centers, had sought refuge in this land; their language is partly Scythian, partly Hellenic. The Budinians, on the other hand, did not speak the same language as the Gelonians; their way of life was also different, for the Budinians were indigenous nomads, the Gelonians farmers, and the two peoples differed from each other* in terms of shape and skin color.

That we have to see Aryans in the Gelonians is already clear from the meaning of their name ("blondes"), which goes back to the same root *ghal* as the Aryan peoples' names discussed above (p. 41) (Germanic tribes, Gauls). Their language, their religious service, their outward appearance reminded the Greek merchants so much of their own language, their own cultus, their own physical habitus, that it is not striking that Herodotus saw Greek descendants in them. We see in this only a further confirmation of the previously substantiated assumption that the type of the Aryan Hellenes is identical with the type of the other Aryan tribes (Germanic tribes, Gauls, etc.) and that at the time of Herodotus the habitus of the Greeks still bore all the characteristic features of the Aryan race.

The whole passage contains a difficulty, however, in that the characteristics that we expect from the Gelonians on the basis of the etymology of the name and the similarity of the Gelonians to the Greeks found by the Greek merchants, namely the blond color of the hair and the blue color of the eyes, are attributed to the Budines and not to the Gelonians. Herodotus says: Βοοδιῖνοι ὅς ἐστιν ἄνθρωποι καὶ κοκκῖνοι ὡς καὶ ἰταῖοι, whereby the adjective *κοκκῖνοι* obviously refers to the blond color of the hair. The difficulty is easily explained, however, if one considers that these peoples, as Herodotus himself notes (6.46 {*ἡ δὲ γὰρ ἑκείνη ἡ πόλις καὶ οἱ Βοοδιῖνοι καὶ οἱ κοκκῖνοι*), were often confused with one another. Apparently, Herodotus himself did not succeed in avoiding the danger of this confusion.

In the city of the Gelons (*Γελωνία*) we have - about this we can

There can be no doubt about it - one of those mighty bulwarks before us, through which Aryan rule in the Scythian country was to be secured. In addition to the small fortifications, there also had to be formal

fortresses with strong garrisons, from which the approximately

vulnerable points in the country can be protected quickly and easily and provided a safe haven in the event of an emergency.

As far as the name *Saxat* is concerned, the name *Saxat* (Old Persian *Qaka*) also appears alongside it. We know at least from the Persians that they called the Scythians by

this name.^x Since the sound group sk often becomes 9 in Indo-Iranian, there is nothing to prevent the root 9a- (Greek cn) of

Qa-ka (Saxat) can be traced back to ska. Since the roots ska and sku have the same meaning (to cover, to make dark), as has been shown on p. 123, I am inclined to assume that the root forms^x sku-dha and^x ska-ka have the same meaning as we have shown on p. 124 for the names KeXrat and SxoXOTOL, namely the meaning dark, black, even if an adjective formed with one of these suffixes as an appellative of this meaning * cannot be proven. However, this finds significant support

This is explained by the name of the members of the fourth Indian caste, the Qud-ra, who undoubtedly received their name from their black skin color. But this name is also used by the SuBpot people in northern Arachosia,²) who, what is particularly noteworthy, are called SxoBpot (i.e. root ska) by Dionysius Perieg.³), for which name there are still the manuscript variants

*) Her or VH. 64; Chocrilus ap. Strab. VII. 3, 9; Plin., Hist. nat. VI. 17. Likewise, two peoples of this name appear in the inscriptions of Darius, namely the Saka (Qaka) haumavarza (the Saka preparing the Haoma) and the Saka tigrakhauda (the Saka with the pointed helmets). Cf. Müller, Allgemeine Ethnographie 529. The Qakās of the Sanskrit documents (Diefenbach, Origines Europaeae 83) are probably also to be understood as Scythians. On the other hand, the name of the Qkhudra in one of the inscriptions from Persepolis (Spiegel, Die altpers. Keilinschriften 50), which may also have been Scythian, turns out to be Greek 2x66ai (root sku).

²⁾ Ptoi. VII. 1, 61; VI. 20,3.

³⁾ Dionys. Per. v. 1142.

Sxoöpot and S68pot. I find further confirmation in the mythical name Cacus, which, like the Greek xaxoc, I trace back to a basic form¹⁰⁷ ska-ka-s (dark, black). That the names of colors are also used to denote mental qualities is shown by German compounds such as: dark feelings, gloomy thoughts, gloomy mood, etc., as well as the Greek jxsk-a-g (black) in comparison with the Latin malus (bad) formed from the same root mal, where, conversely, the Greek has retained the original meaning¹). The name Cacus would then have retained the basic meaning of dark, black, if, as I believe, we really do see in the mythical Cacus the representative of the dark pre-Aryan indigenous population of Italy and in Hercules the representative of the victoriously advancing light-colored Aryans. However, the etymology of the name Hercules, Greek 'Hpxatöjc, whose first part I associate with the root sar (bright, light, to be white, cf. p. 99) and whose second

107 Likewise, the related languages predominantly show the original meaning: Sanskr. mal-a-s dirty, ticklish, but mal-ina-s dirty" unclean, black; Lat. mel-s black; Ahd. meil macula. Cf. Curt ins, Grundzüge der griech. Etymologie 370, which also includes the Horatian: Hie niger est, hunc tu Romane caveto, where niger also appears in a figurative sense.

part with the Greek xps-a-c, Latin car-o flesh, col-o-r color (cf. p. 37), which are formed from the root skar, to cover scal. The Latin name Hercules would have been influenced by the Greek 'HpaxX/j; originating from^x Sercules.

Since the Old Persian name Qaka (from *skaka) is not specifically Persian, but of Aryan origin, and the name was in any case once used by the Aryans to designate the dark brachycephalic population of Europe and Asia in general, alongside the synonymous Scythians, it will not surprise us at all if we learn that the same name has still survived on European soil in the name of a predominantly dark brachycephalic people, in the hitherto unexplained name of the Czechs. I believe I can recognize it all the more definitely in this name, as the identification of Cech, plur. Ceři (next to Cechovö) with the presupposed basic form^x ska-ka, since sk, respectively k, is very common.

has changed to č in Slavic and likewise k to s (see the following).^{*} But s also frequently changes to ch between vowels, e.g.

i is the first person sing. of the aor. Comp. da-chü from the root Ida (give) from^x da-sü and this one from^x da-sam¹). For the

The assumption that c goes back to sk or k also seems to be supported by the forms Ks/tot, Kts^tot handed down by ► Chalkokondylas.

So the name Öech means something like the dark, black one.

What is true of the Slavs is also true of the old Prussians, the Lithuanians and the Latvians. All these peoples are not true Aryans by descent, but speak only Aryan languages and are . their somatic type, which is similar to the somatic type of the Ugro-Finni.

The fact that the phonetics of the Aryan peoples was originally identical has been more or less modified by the greater or lesser addition of Aryan blood. This realization, as well as the proof that Scandinavia is the homeland of the Aryans, puts us in a position to decide one of the most important questions of Aryan phonology, which has occupied comparative linguistic research for several years and has still not found a satisfactory solution, just as we have, on the other hand, a weighty support for the correctness of the ethnological explanations in the phonetic facts on which the whole dispute is based.

^{*} Ascoli²) has found that in a series of

In the case of the Indo-Iranian sibilant 9 (16 in number), which goes back to the original k, there is also a sibilant in Lithuanian-Slavic, namely sz (=S) in Lithuanian and s in Slavic, while the other Aryan languages (Greek, Latin, Celtic, German) show the original k in the same words, e.g. Sanscr. e.g. sanskr. \$ata-, zend. \$ata-, lit. szlmta-s, altsl. süto hundert; sanskr., lit. szakä branch; sanskr. \$van-, lit. szfi, szün-s dog; sanskr. 91'u, zend. \$ru, . altsl. slu-ti hear; sanskr. a^va-, zend. a\$pa, horse, lit. aszvā big

Mare; sanskr. da\$a-, zend. da\$a, lit. döszi-m-t, altsl. des^ti ten.

The significance of these Indo-Iranian-Slavolithuanian harmonizations

appears all the greater when one considers that in the same languages the original k (or K) appears everywhere in a large number of cases, e.g. in Sanskr. ka-s, (Zend. ka-) quis, kadā

¹) Schleicher, Comp. 296.

²) Ascoli, Vergleichende Lautlehre des Sanskrit, des Griechischen und des Lateinischen, translated by J. Bazzigher and Schweizer-Sidler. Halle 1872, p. 44.

quando, lit. ka-s that, kadā that; sanskr. kar, zend. kar make" kur-iū I build; sankr. katvar-, zend. Mathwar-, lit. keturi, altsl' öetyrjie vier; sanskr. tak laufen, streifen, lit. tek-u, altsl. tek-š ich laufe, ich streife; sanskr. vrka-s, zend. vehrka-, lit. vilka-s, altsl. vlükü Wolf. It is of the greatest importance for the evaluation of the whole phenomenon to also refer to those cases where

such a correspondence between Indo-Iranian on the one hand and Slavo-Lithuanian on the other does not occur, e.g. in Sanskr. 9t, ^ai-tai, zend. 9t, 9ae-te lie, Old Sl. po-Öi-ti rest, po-koj

calm, po-koi-ti calm, lit. pa-kaj-u-s calm; Sanskrit a9man-, lit. akmu- (gen. akmdn-s), Old Slavonic kamy (gen. kamen-e) stone; Sanskrit pa9u-, Zend. pa9u-, Old Prussian pecku cattle. If in these cases Indo-Iranian has the sibilant sound and Slave Lithuanian the original k, then the reverse is also true in the Slavo-Lithuanian language group, where s or sz is used for the original k, e.g. Old Slav. srüd-i-ce, lit. szird-i-s Herz, where the related languages show k: Greek xap8-fa, Latin cor, Genit. cord-is, Gotb. hairt-6, Sanskr. hrd (from^x); lit. szelp-ti helps alongside Germ. halp and Sanskr. kalp. Even within Slavo-Lithuanian, guttural and sibilant sounds alternate, e.g. lit. szejm^na Gesinde, kema-s Dorf, Hof, kaimyna-s Nachbar; slep-iu - I hide, slap-tā Heimlichkeit next to the Old Prussian au-klip-t-s hidden; sl. sloniti sš acclinari next to kloniti inclinare, lit. klōnīoti-s to incline.

Similar observations can also be made with regard to guttural media. Both Indo-Iranian and Slavo-Lithuanian show an alteration of the g-sound in certain cases where the other Aryan languages do not, e.g. Sanskr. gnā, Zend. zan erkennen, Lit. zin-d-ti wissen, Old Sl. zna-ti kennen (Greek 7i-YV(o-5x-co erkenne); Sanskr. marg, Zend. marez (Latin mulg-e-o)

reiben, lit. melz-u, Old Sl. mlüz-š melke. The sounds g, z, 2 are secondary developments from an original g. In other cases, the same sound has also been preserved in the four languages mentioned, e.g. Sanskr. giri-, Zend. gairi-, Old Sl. gora Berg, Sanskr. agni-s, lit. ugni-s, Old Sl. ogni Feuer.

It is clear that this could not be a coincidence, as Ascoli also expressly stated that it was quite impossible to

to regard this phenomenon as purely accidental. As far as the explanation of this is concerned, the same scholar quite correctly recognized the cause of the sound change in that he explained the affection of the original k-sound as having arisen through the effect of the parasitic

fricative j, which, as is well known, likes to attach itself behind consonants in some Aryan languages, especially in the Romance and Slavic languages.

This parasitic sound can now transform an original k in various ways: ka first becomes tja, then tsa (ca); this tsa becomes tša (Öa) on the one hand through renewed affection by the parasite j, on the other hand through assimilation of the t to s ssa (sa) and through renewed affection by the parasite j ša. I therefore draw up the following scheme:

ka (basic Aryan form^x kantam) ka
t'a
tsa (ca, lat. centum)

(sanscr. ka =) ca (ital. cento) ssa (sa, French šent)

sa (french, chapeau).

ga (lit. geltas)
g'a d'a dza

sanskr. ga (ital. giallo) zza (za, zend> zairita) za

(altsl. zlütü).

The question now arises whether this parasitic fricative was already formed at the time of the Aryan linguistic community, or whether it only arose after the separation. As coli assumes the former* In raising the question of how to explain the similarity between Indo-Iranian and Lithuanian-Slavic, he says (p. 47) that it could be answered in two ways: "Either we assume that Lithuanian-Slavic has remained united with Indo-Iranian in common life longer than the other Aryan idioms of Europe; or else we must imagine that the original k has been slightly affected by the parasitic sound in a certain number of cases from the primeval Aryan period onwards, that it later resisted this intrusion in some languages, but that in others it underwent uniform transformations as a result of the uniform development of the ancient affectation, which would represent similar but mutually independent effects of the same cause. According to this hypothesis, for example the word for ten in the unified period with a slight alteration of the k would have been daka; from which on the one hand daka, as it were the healed type, to which Greek, Italic, Celtic and Germanic would go back, and on the other hand the type dakja with the penetrated parasitic sound, to which the two language elements

with the sibilant sound, namely Indo-Iranian and Lithuanian-Slavic, would be traced back in the way shown in its place. This hypothesis is more cautious than the other, which would relegate the separation of Lithuanian-Slavic from the Aryan language of Asia to a later time.

Ascoli himself has drawn attention to a difficulty that stands in the way of this solution to our problem. For in this explanation we must assume that in Greek, Italic, Celtic and Germanic the ancient germ from whose further development the Indo-Iranian and Lithuanian-Slavic sibilant for the original k is supposed to derive has died out, an assumption which is quite arbitrary and finds no support at all in the fact that Indo-Iranian k sometimes corresponds in Greek, Italic, Celtic and Germanic to qu or some sound derived from k, e.g. sanskr. ka. greek. ts, Latin que; Ved. kis, Greek Tt\$, Latin quis, Osc. pis, British pui; Sanskrit katvāras, Greek KtcJopSs, Latin quatuor, British petuar, Rum. patru, but lit. keturi; Sanskrit pankan, Greek 7tsp.K8, Latin quinque, British pimp, Goth. ^fimf, where Ascoli assumes (p. 70) that these are original k, which had already been affixed since the Indo-European age, but in an undefined way, so that the development of the affix would have developed in different ways in the course of the following ages. "If

If, therefore, when considering the sibilant sound obtained in Indo-Iranian and Lithuanian-Slavic speech as a representative of the original guttural tennis, we have to come up with a typical example dak'a (ten), we will have to think of a typical example for the examples that concern us now, which could be written Eatvar- (four), whose indeterminate parasitic sound among the Indo-Iranians finally adopted the palatal pronunciation (kijatvar-, from which Eatvar-, Eatvar-) in a relatively modern epoch, but among the Europeans, or at least among those whose idioms here reflect an old kv, would generally have become fixed as a labial or labio- dental sound. In this way

in Indo-Iranian

I language the full, but certainly not simultaneous, development at-
of the affections, which now present themselves as one and the same affection with
I double effect, and the development of Eatvar,
Eatvar would thus finally coincide with kj, which sprouted from the healthy stem in the Indo-Iranian period; on the other hand, the type daEa would be found everywhere in the European group, except in the Lithuanian-Slavic language, and conversely, it is precisely in the Lithuanian-Slavic language that the few numerous examples of the type Eatvar are found, as they are also found in other ways in the > language type, sometimes even elsewhere."

J. Egger has rightly declared that it is completely wrong to equate the Latin qu with the Sanskrit E. E; to him, it sounds no different than if someone claimed: $1 = 3$, because both numbers are equally distant from 2; if one tries to trace the two sounds qu and k back to a common origin, they ultimately always meet in the pure, non-affixed k. From this he draws the correct conclusion that there was no double k in the basic Aryan language, but that the same language only knew one k. We must

therefore attribute the origin of all affixes that affected the k sound in the individual Aryan languages to the special life of these languages. ²⁾

The results of the preceding investigations into the ¹ origin and composition of the Aryan peoples make it possible to

¹⁾ J. Egger, Studien zur Geschichte des indogermanischen Consonantismus. f. . Vienna 1880, p. 13.

²⁾ Since Ascoli gave the impetus, the whole question has been discussed many times.

With the exception of J. Egger, all (Fick, Joh. Schmidt,

It is only now that it is possible to provide an explanation for the whole phenomenon of palatalization and assibilation which does full justice to all the phonetic facts involved in this question. For it is a characteristic peculiarity of the Ugro-Finnish languages to let the consonants be followed by parasitic sounds (i and j, also u and v), in which we found above the actual cause of this palatalization.

appearance. It is therefore no coincidence that the language of precisely those Aryan peoples who, according to their physical origins, belong to the Ugro-Finnish branch of the Turanian race, above all the brachycephalic Romans and Slavs, exhibit so many palatal sounds and sibilants which, as a comparison of the Aryan languages with each other proves, were completely foreign to the basic language. The example of Sanskrit, whose linguals (t, d, th, dh, n) belong to the language of the indigenous Indian population, the Dravidians, clearly shows that the phonetic character of the language of the Aryan conquerors could undergo changes through the language of the Aryanized subjects. Ascoli aptly remarks¹): "By adopting the language of the Aryans, these (the Dravidians) alter it in exactly the same way as the Celts of Ireland did with English, and other Celts with Latin.

have. It is not Sanskrit that absorbs the linguales

but it is the non-Aryan natives who appropriate Sanskrit and make it bite-sized." "It is with the

Havet, Hübschmann, Möller, Leskien, Fr. Müller, Brugman-Osthoff, Collitz) with Ascoli, a twofold linguistic k. In Germany, the work of Fick (Die ehemalige Spracheinheit der Indogermanen Europa's. Göttingen 1873, p. 3¹ -34), who believed he could prove that the Aryan language stem in all its protoethnic periods possessed two completely separate k-sounds, one of which was represented in Aryan by k and k (tscha), the other by 9, and between which there was almost no contact at all until they partially merged into one sound in Greek and Italic and almost completely merged into one sound in German. Fick designates the sounds in question by k and k; to the former belong all purely preserved k together with the type katvar, to the latter the type daka, so that we have the following two series: ar. k"= indoir. k, slavolet. k, germ. hv (f), celt. kv (p); ar. k = indoir. 9, slav. s, lit. sz, germ. h, gräcoit. and celt. k. However, Fick has not succeeded in substantiating his assumption in a convincing manner.

³⁾ Ascoli, op. cit. 197.

The case is quite the same with the Aryan elements, which have been altered in India by the reaction of the natives, as with the Latin elements, which have been altered in France by the

Celtic reaction; and indeed the reaction is more noticeable in Prakrit than in Sanskrit, as it is more noticeable in modern French than in the ancient writings of France or in Provençal.^w Having thus found the origin of the sibilant and squelch sounds, it is now no longer difficult to show how it came about that Lithuanian and Slavic as well as Iranian and Indian have the sibilant sound in the same words. When the Aryans first turned eastwards, they subjugated and Aryanized the Ugrian-Finnish peoples they found there, and thus the people of the old Prussians as well as the Lithuanians and Latvians came into being. In the course of time, the pure language of the conquerors and rulers was affected by the speech of the subjugated and Aryanized people in such a way that at least part of the k-sounds that had become s in the mouth of the latter also penetrated the language of the former and became established in it. When later descendants of these first conquerors extended the Aryan dominion further south and brought about the Aryanization of other peoples of the same Ugro-Finnish branch, they became acquainted with a number of words only in the transformation that the. The basic form of these words had undergone a transformation in the mouths of those who had first become acquainted with the Aryans. This is the reason why Slavic, i.e. the language of these later subjugated Ugrian-Finnish peoples, is so strikingly similar to Lithuanian, both in general and in the cases mentioned above. From the territory of the Slavs, the advance continued in the same way across the steppes of southern Russia and the Caucasus (Ossetia) to Armenia and Iran, and from there finally to India. Of course, a longer period of time passed each time before the descendants of the first Aryans to invade a new land set out to subjugate new lands and new peoples to Aryan rule, so that many centuries must have passed before the grandchildren of those Aryans who had first settled on the soil of Prussia and Lithuania set foot on the Pendschab. The shortest period was probably the one between the

Penka, *Origines Ariacae*.

10

immigration to Iran and immigration to India. This is due to the close relationship between Iranian and Indian.

Thus it came about that in those 16 cases the Lithuanian, Slavic, Iranian and Indian languages have the same sound in place of the original k, without the Lithuanians, Slavs, Iranians and Indians ever having formed a closer unity among themselves in the sense that was the case with the actual Aryans in their original Scandinavian homeland. This is already evident from the difference in the physical habitus of all these peoples, of which the Lithuanians and Slavs predominantly bear the characteristic features of the Turanian race, the Iranians those of the Semitic race and the Indians those of the Dravida race.

But only now do we understand how it was possible for such a highly northern race as the Aryans to maintain their dominance in subtropical India for so long. This was only possible because the Aryans had gradually advanced from the north to the south and had become more and more acclimatized to the warmer climate through centuries of residence in countries further south. A comparison of the languages at least shows that the Aryans had lived in at least three parts of the world for a long time before they entered the Pendschab. It

should also be borne in mind that when they arrived in India they were by no means unmixed, but had in any case already absorbed Turanian and Semitic elements, which increased their resistance to the harmful influences of the hot climate.

However, we now also understand how it came about that the Aryans first achieved a higher level of cultural development in India. This phenomenon would by no means be explained if we were to attribute it merely to the natural richness of the country in all kinds of soil products, which makes possible the existence of a very large number of people in a small area, and to] the great advantages in social, political and economic terms which the ruling class of Aryans enjoyed in India as well as everywhere else where Aryan rule had been established. For this very reason, and because other countries that had been subjugated by the Aryans j very early on, such as Italy, also enjoyed favorable

soil conditions, it is necessary to look elsewhere for the cause of this phenomenon. Nor is it difficult to find it. The Aryans, who had penetrated Asia from Europe, were able to appropriate the elements of the culture founded by the Turanian Akkadians and further developed by the Semitic Babylonians and Assyrians at a time when it had not yet spread to Greece or Italy. We also owe it to this circumstance that the oldest poetic productions of the Aryan Iranians and Indians were recorded early on, so that they (Zend-Avesta and Big-Veda) form the oldest linguistic and literary monuments that have survived from Aryan prehistory. However, it is quite wrong to conclude, as is often done, that the original homeland of the Aryans must be sought in the vicinity of Iran and India. This completely overlooks the fact that the Asiatic Aryans first entered the Near Eastern cultural sphere and compares things with each other that should not be compared at all. How can one compare language developments from such a late period, such as those found in Gothic and Old Norse, (with the language of the Zend-Avesta and the Big Veda, which was fixed over 2000 years earlier? If we had received simultaneous linguistic monuments from the Scandinavian Aryans, they would certainly be closer to the basic Aryan language than is the case with the language of the oldest Veda itself. Incidentally, the history of the Germanic tribes is also instructive for the assessment of this question. It is no coincidence that the oldest Germanic linguistic monument has been handed down to us by the Goths and that this monument originated in a country that is very far removed from the Germanic-Aryan homeland. However, it is precisely the latter circumstance that explains why the Goths reached a higher stage of development earlier than their Nordic brothers who remained in their homeland. For the further they had moved away from their homeland, the closer they had come to the central sites of Greco-Roman culture. If one could draw a conclusion about the homeland of the Aryans from I the language as such, one could only compare the presently spoken Aryan languages with each other in order to proceed methodically. Of the presently spoken Aryan languages, however, Lithuanian comes closest to the basic Aryan language, a circumstance which, considered in and of itself, would speak more in favor of the European than the Asian origin of the Aryans. The example of Lithuanian alone shows how little importance should be

attached to the purely linguistic aspect. Lithuanian has preserved so many ancient forms to this day because the Lithuanians are not true Aryans by physical descent, but belong to a race whose most prominent characteristics include a conservative sense (cf. p. 111), which is documented not only in their customs but also in their language.

But the question of the validity of the phonetic laws, which has so far been answered in different ways, is now also open to our understanding. While according to Osthoff¹) the phonetic laws are supposed to act "with blind natural necessity" and Osthoff and Brugman¹⁰⁸) declare it to be a main principle of the "junggrammatical" school that all sound changes take place according to "exceptionless" laws, Miklosich¹⁰⁹) explains: "Sound laws are not laws of nature." The former view is supported by certain general considerations relating to the nature of the origin of sounds, while the latter is supported by the fact that the claimed exceptionlessness of sound laws cannot be proven from language, even by inductive means.

By proving that a large part of the Aryan peoples, including the Lithuanians and Slavs, are not true Aryans by birth, but only learned to speak Aryan from the conquering Aryans, we are in a position to refute the main objection to the doctrine that the laws of phonology are without exception and to understand the phenomena of phonetic change, both regular and irregular, correctly. For, as has now been recognized, Curtius' theorem that all sound changes arise from the striving to make pronunciation easier, to simplify articulation, cannot explain a large part of the sound changes that have actually occurred; indeed, it can even be shown that some sound developments follow a direction that is virtually opposite to that of simplification. Sievers *), who has the merit of having first pointed out the weak points of the previous theory, aptly remarks that the differences in the difficulty of producing speech sounds in and of themselves are extraordinarily small and that real difficulties with regard to imitation generally only exist in relation to foreign sounds.

It can be asserted with certainty that if the Aryans had never come into contact with peoples of a different origin, the various Aryan languages would still have the same phonetic character that the basic language has had from the beginning. As is well known, this is not the case in any single language, and the reason for this lies in the fact that the phonetic character of the Aryan language has been profoundly influenced by all the peoples who later adopted it by accommodating the Aryan sounds to their linguistic habits. And that such phonetic transformations of the linguistic material take place when it passes from one people to another is shown by the example of all loanwords, and these transformations are all the greater the greater the distance between the races to which the peoples concerned* belong.

108) Osthoff, *Das Verbum in der Nominal-Composition*. Jena 1878, p. 326.

²) Osthoff and Brugman, *Morphologische Untersuchungen auf dem Gebiet der indogerman. Sprachen*. I. Leipzig 1878, p. XIII.

109) Miklosich, *Lautlehre* 259.

They are often so great that it is often extremely difficult to recognize the foreigner in the garb of the new homeland. Thus, for example, Christ became Ki-li-sse-tu in Chinese, Buddha became Fo, Benares became Po-lo-nai, Brahma became Fan.^{110 111}) In the Kaffir language, English to baptize becomes bapitizesha, gold becomes igo- lide, apostle becomes umposile, sugar becomes isugile¹¹²). In the language of the Maori, who belong to the Malay race, the name of Emperor Franz Joseph appears as Paraniti Johepa, Oesterreich (Austria) as Atiria, St. Stephan as Hitewana, Lerchenfeld as Reahenweutu, Schönbrunn as Heneparuna, Arsenal as Ahenara.)¹¹³

It is highly probable that the ultimate cause of the phonetic transformation of borrowed speech is to be found in the differences in the formation of the vocal and speech organs of the various races. A comparative anatomy and physiology of the speech organs of the various races is still lacking, but the preliminary work that has been done in this respect speaks decisively in favor of this assumption. For example, Gr. Duncan Gibb has shown^x) that the structure of the larynx is essentially different in whites and Negroes. First of all, it is the constant presence and size of Wrisberg's cartilage that gives the laryngeal mirror image of the Negro something peculiar to that of the white man. Another difference is due to the direction of the upper surface of the vocal cords and the position of the Morgagnian ventricles. The very fact that the anatomy and physiology of the organs of speech have not hitherto been treated comparatively with regard to the different races, in connection with the fact that comparative linguistic research in general and phonetics in particular have regarded all Aryan peoples as a unit from a physical point of view, is mostly responsible for the fact that the high expectations that were initially attached to the physiological treatment of the development of Aryan sounds were only partially fulfilled and that the ultimate causes of most sound changes remained hidden.

It is all the easier for us to imagine the linguistic conditions that developed each time after the Aryanization of an allophile people, since most European countries still exhibit similar linguistic conditions today. Everywhere, in addition to the language of the ruling Aryan class, a language developed which was initially phonetically different from it and whose bearer was the subjugated people. And just as the language of the common people is still continually influenced by the language of the higher and educated classes, and just as the language of the educated classes cannot escape the influence of the language of the common man, so it was certainly at that time, when the relationship between the individual social classes was essentially no different from what it is today.

*) G. Duncan Gibb, Essential points of difference between the larynx of the Negro and

110J) Sievers, Grundzüge der Lautphysiologie 126.

111) Sayce, The principles of comparative philology 247.

112) M. Müller, Lectures on the Science of Language. II. 171.

113) Fr. Müller, Grundriss der Sprachwissenschaft. H. 2, 43.

that of the White man. Memoires read before the Anthropolog. Society of London. H. London 1866. Cf. the paper on this treatise in Archiv für Anthropologie. II. 110.

Thus those 16 words with the sibilant sound instead of the original k sound also entered the language of the ruling class of the Aryans. The phonetic change itself, however, began in the mouths of the subjugated people, who originally spoke an Ugro-Finnish language and only later exchanged it with the Aryan, in such a way that they gave the k a phonetic form that corresponded most closely to their linguistic habits.

This mutual influence between the language of the ruling class of Aryans and the language of the subjugated allophilic population explains why the Aryan languages show such great differences in the treatment of one and the same sound when compared with each other, as well as when viewed in isolation. And these differences must have become all the greater the longer and the more often a language was subject to the influence of allophilic peoples, as was the case with Sanskrit, for example, which shows undoubted traces of Turanian (Ugro-Finnish) and Dravidian speech, while Semitic influences can be detected in the Greek phonetic inventory.

The Aryan loanwords in Ugro-Finnish show that one is justified in attributing the above-mentioned change of sound from k to s to the influence of the Ugro-Finnish element. These loanwords are all the more significant because they originate from a time when the Ugro-Finns still formed an ethnic unit and the Aryans were not yet divided into the ethnic groups that we know from historical times. There are a whole series of Ugro-Finnish words borrowed from Aryan, in which an Aryan k is contrasted with an Ugro-Finnish s or š, or S respectively. The Ugro-Finnish phonetic forms for the Aryan^x katam hundred are instructive in this respect: finn. sata, ehstn. sadda, liv. sada, mokSa-mordw. sada, ersa-mordw. sado, tscherm. sydö, šyde, sjudo, syij. sjo, So, wotj. su (sju), sjü, ostj. söt, sät, wog. sat, schät, magy. szds, aber lapp, tjuote, šuötte. All these forms go back to a common Ugro-Finnish basic form ^x tjata (from^x kata) and prove in an irrefutable way that we are completely justified in regarding all similar phenomena of sound change in the area of the Aryan languages as the result of the reaction of the Ugro-Finnish element, which is so widespread across Europe, just as these phenomena mostly occur where the population is predominantly composed of Ugro-Finnish elements (Slavs, Romansh) and are absent or nu? They occur very sporadically where such an element is either completely absent or only weakly represented. It is no coincidence, for example, that in both Old Slavic (siito) and French (Šent) the sibilant for the original k sound appears in one and the same word, without any borrowing from one language into the other having taken place. The same causes have the same effects. It is only now that we can understand the immense similarity between the Ugric-Finnish phonetic laws and the phonetic laws of most Aryan languages, a similarity that becomes all the more apparent the more precisely we get to know the modern developments of Aryan in the various Slavic and Romance idioms¹¹⁴ "Only very few of the latter (the Aryan phonetic laws) can be named,

114') Cf. Anderson, op. cit. 197.

which would not apply equally well to the Finno-Ugric languages, and conversely there are hardly two or three phonetic laws to be found here which have not yet been proven in any Indo-European dialect" *).

Anderson's remarks on p. 184 are particularly instructive for our question: "The guttural tennis is subject to manifold changes in the Ugro-Finnish languages as well as in the Indo-European languages, and also quite often changes into t and c. This happens especially before high-sounding vowels, and in Votic, for example, such a k has regularly become c. But such a change can also be observed in other related languages. This happens especially before high vowels, and in Votic, for example, such a k has regularly become c, but such a change from k to t and c can also be observed several times in the other related languages. Livonian is particularly interesting in this respect, because the sound change in question takes place here before our eyes, as it were, in that the two dialects of this language show the different stages of transition in the same words. Thus, for example, the kukuk is called keg or gek in Courland, but kieg, kegg and fegg in Livonia, and likewise the hand: käi², käz, kes etc. and in Livonia kes and t'es; colorful: kerabi and kirabi or firabi; the side: külğ and külğ, fulg; the cold, the frost: külma and fulm, tül^m* ten: küm and t'um etc. In Votic the words in question are currently: cäko, öäsi, öirjawa, Bülöi (= fin. kylki), öülmä and öümme', while the so-called Krevinen, i.e. The so-called Krevins, i.e. the Votes who were brought to Courland as prisoners of war around 1445, still spoke käzi, kirjau or kirjaw (colorful), külm or kühne (cold) and kümme (ten), so that the Votic ö can only have developed from an earlier k in the course of the last four centuries. Similarly, in Lappish an original k has not infrequently become c, and perhaps here too this ö may only have replaced an older f or tj in more recent times, at least the dictionary by Lind-ahl and Oehrling (Stockholm 1780) gives the sound in question as tj, which is probably for a good reason. In Magyar, Cheremisian and the Permian languages, too, there are several perfectly reliable examples of the sound change in question."

But not only the parasitic j (i), but also the parasitic v (u) (e.g. Italian *duomo* from Latin *domus*), which likewise frequently occurs in the Aryan languages after explosive sounds, has the same origin, as can be seen from the fact that the same sound phenomenon is also observed in the Ugric-Finnish languages. Thus *magy. häj* (from^x *kaj*) corresponds to *vot. kvajo* fett werden, from which *finn. kuu*, *mordw. kuja* has become fett; *magy. hat sechs* is the same as *vot. kvaf* and *finn. kuusi* (for^x *kuuti*); likewise *finn. kaasu* haze, fog = *vot. kvaz* air, weather; likewise *sanskrit. kaka* crow = *vot. kvaka* crow, *finn. kukko* cock; likewise *magy. ház* hut, *finn. kota* = *vot. kva*; likewise *syrij. and perm. vo*, *ehstn. vöz* = *finn. vuoz*i-den; likewise *perm. vol'ny* to scrape off the bark, to smooth, *ehstn. völin* to scrape smooth, carve, plane = *finn. vuolen*; likewise *syrij. koza*V distaff, *ehstn. közel* Kunkel = *finn. kuosali*, *kuoseli*; likewise *syrij. roß'* Russe = *finn. ruotsi*; likewise *syrij. sol* salt, *ehstn. söl* = *finn. suola*.¹).

SIXTH SECTION.

Phonological character of the basic Aryan language.

The vocalism of the basic Aryan language was very simple; it knew only the vowels a, i, u. The diphthongs ai and au belong to a later period of development, but their emergence still falls into the time before the separation of the Aryan peoples. On the other hand, it was wrong for some scholars to attribute the sounds e and o, which arose later during the special life, to the common original Aryan language; apart from other considerations, this assumption is contradicted by the mere fact that Iranian and Indian show a pure a everywhere where, according to this theory, an e or o should be expected and the assumption is completely unfounded and highly improbable that the sounds e or o to be expected in these languages would either have been inaccurately fixed or would have changed into a later.

The results of my ethnological investigations into the original homeland of the Aryans are also supported by the well-known fact that Gothic vocalism, along with Indo-Iranian vocalism, comes closest to the vocalism of the basic Aryan language.

It is somewhat more difficult to determine the consonantism of the basic Aryan language. According to the conventional assumption, it had the following consonants:

*) Cf. the apt remarks of Curtius, *Grundzüge der griech. etymologie* 93.

Gut	k	g	gli
Deu	t	d	ie
Lab	p	b	bh.

These current Lutes step still the continuous
(Pal.), r (Lingu.), s, n (Deut.), v, m (Lab.). ^{x)} sounds: i

The main difficulty lies in the fact that in some Aryan languages (Indian, Iranian, Greek) the tennish aspirata (kh, th, ph) appears in a number of words, while others (Latin, Celtic, Lithuanian, Slavic) do not show this phenomenon at all, and Germanic shows neither aspirated nor unaspirated tenues, but spirants.

Before I move on to the discussion of the matter itself, I will cite some of

these cases:²) sanskr. kakkh-ati (next to kakk, kakh) lachen, griech, xay[^]-ofc Lacher, xax/-aC<o lache, lat. cac (h)-innus Gelächter, cachinn-ari lachen, ahd. huoh, mhd. huoch Hohn, mockery, ahd. huoh-ön, mhd. huohen verspotten, verhöhen, verlachen;

*) Schleicher, Comp. 10.

²) Grassmann (Zeitschrift für vergleichende Sprachforschung. XII. 96) has already cited 16 cases in which the Greek aspirata is accompanied by a tenuis aspirata in Sanskrit. Some of these, supplemented by the corresponding forms in the other languages, are found in the text; of the others I give the following: 1) Sanskrit sphur (to thrust, to hurl; later: to tremble, to shimmer), Greek asupa, otpupd-v; 2) Sanskrit sphar, caus. to hurl, to make shimmer, Greek acpatpa the ball, originally the hurled one; 5) cKpdX-ac footstool beside Sanskrit phal-aka-m shield, bank. phal-aka-m shield, bench, from the root phal for^rsphal to split; 9) yakivcj; = khalina-s teeth of the bridle; ll)pidy7], -p.ayo-c, pdyopiat, pa'yatpa next to sanskr. makhā fight, makhā-s sacrifice, sacrificial animal, fighter, makh-a-s sacrifice; 16) dlhqp, gen. dñi[^]po; hachel, sword tip, arrowhead next to sanskr. athari lance tip (arrow); 16) -9a as ending of 2nd sing. Perf. corresponding to the Sanskrit ending tha, e.g. ols-fta = vet-tha. Grassmann makes the following remarks on this: "In view of the multiple agreement which, according to the above compilation, prevails between the hard aspirata of Sanskrit and the Greek aspirata, and which would have proved to be even greater if one had wanted to include other equally probable but less certain cases, I it is difficult to believe that only coincidence has prevailed here;

On the contrary, we must assume that the hard aspirates of Sanskrit were already developed as such in the common language before Greek was separated from it."

sansk. knath, knath-ati schlagen, fnath, <jnath-ati schlagen, zend. <jnath schlagen, Greek xsvt-siü stossen, stechen, altn. hnjodh-a schlagen, stossen, ahd. hand-eg scharf, stechend;

sansk. kapāla shell, braincase, skull, greek xsoak[^] head, ags. hafola, hafola head;

Old Pers. kaufa Berg, Zend. kaofa Berg, hump, Greek xucpo-s Buckel, K6'£O-g Bergname, lit. küpā Fern., kaupā-s Masc. Haufen, Old Sl. kupu Haufe, as. hōp, ahd. hüfo, mhd. hüfe Haufe;

sansk. Šankha shell, greek xoy/o-c, xoyjfTj shell, lat. congiu-s a mass;

sansk. tak, tak-ati and tak-ti shoot, rush, hurry, zend. tak run, swim, flow, taka run, but takhara to be inferred from takair-ja flowing, Greek taxspo-s, reversed ra/- run in Ta/-oc, Ta[^]-tvo-?, lit. tekū run, Old Sl. teka run, flow;

sansk. tap, tap-ati warm, glow, zend. taf-ta (inflamed etc.) irascible, greek tscp-pa ashes, lat. tepe-facio, tep-6re, altsl. top-iti warm, ags. thef-ian rage, anger;

sansk. tarp, trmp-ati, tarpati to be satiated, to be full; to satiate, to refresh, to delight, trp-ta to be full, fat, satiated; zend. traf-afih food, Greek. a) Tpa<p-, Tpscπū), TS-Tpo©-a nourish, feed, b) xepz-, τσοκο satisfy, refresh, lit. tarp-stū,

tarp-aü, tärp-ti thrive, grow fat, strong, goth. thraf-st-jan comfort;

sansk. trank, trankh, trakh walking, moving, zend. thrak pulling, marching, thrakh-ta marching, pulling, Greek Tp3/<n running, goth. thrag-jan running, neuslav. trc-ati running;

sansk. truph, tröph-ati, trup, tröp-ati, triumph, trump-ati injure, damage, turph-ari, turph-aritu quickly striking, Greek 8p6zT(o for^x Tpu<p-Toj loosen, crumble, Tποcp-q looseness, ppo'p-os lumps, lit. trupü, trup-eti crumble, trup-a-s loose, trup-iny-s lumps;

zend. path, pathjaiti an-, fill; be full, path-ma memory, Greek m-, Tzaausc, waTrst for^x -a "j-sc = zend. pathjaiti pour, sprinkle, Trar-sopiat, zs-zaa-jiai nourish, goth. föd-jan nourish, altsl. pit-ajq, pit-ati nourish, raise;

sansk. pra, zend. fra, frä, greek -pō, but also cppo in Qpooooos ^potjitov, opoopo-c, (ppocpa, lat. pro, umbrian pru, altsl. pra-, pro-vor, lit. pra- vor, goth. faür, faüra vor;

sansk. prath, prath-ate to spread out, pratli-ä the spreading out, prath-as width, prthu, also prathu wide, zend. frathanh width, perethu wide, Greek irXaT-o? width, TvXaxo-* wide, lat. plant-a sole of the foot, lit. plant-u, plas-ti to spread out, to become wider, platü-s wide;

sansk. math, manth-ati, math-näti stir, turn, whisk, math Masc. whisk, greek battle-worm, jioö-oopa turning wood at the oar, p/vö-o.-c, [Mvfh] Quirlkraut, mint, lit. ment-ure Quirl, lett. ment-a Schaufel, ment-^t mit der Schaufel rühren, altsl. meta Drehholz, met-ezi Getümmel, mot-iti sš agitari, mqta mes-ti xotpctTt"), altn. mönd-ul-1, nhd. Mangelholz and (more correctly) Mandelholz, Drehholz, (die Wäsche) mangeln;

sansk. mith, meth-ati and mith-ati to join someone; alternating, quarreling, altercari, mith-as together, alternating, mith- una paired, neuter. mating, mating, zend. with, mith-näiti joining, near, dwelling, dwelling, mith-want, mith-wara neuter. Connection, pair, maeth-a dwelling; pair, association, maeth-man union, mating, Greek p-oir-o-c mutuus, Latin müt-uu-s pairwise, alternating, lit. mint-u, mit-aü, mis-ti dwell, nourish, Old Sl. mSs-to place, city;

sansk. sakhi = zend. hakhi friend, sanskr. sakhä friend, sakhja friendship, lat. socius comrade, lit. seki-s (stem sekja-) who goes after, follows, in ped-seki-s (following the trail) scent dog;

sansk. skhad, skhad-atš zerspalten, zend. \$kend-a Schlag, Bruch, Schändung, Greek for^x ö/ao-jco ritze, spalte, lat. scand-ula Schindel, cf. 0%tv8-aXa-p.6-<; Schindel, altsl. skad-a defectus;

sansk. Ühid, khinat-ti spalten, sprengen, brechen, zend. \$kid <;tind- ajeiti spalten, sprengen, brechen, griech. für^x o%ß-j<o, o/ß- Fetzen, Scheit, lat. scindo, sei-

sci-di, scis-sum spalten,* lit. sküd-ra, lett. skaid-a Spahn, ahd. seit, mhd. schit Scheit;
 sanskr. khad, khād-ajati cover, veil, lack, khad-man cover; deception, deceit,
 zend. \$Kad deceive in ava-^ka^-ta deceiving, Greek a%aö-d>v cell, honeycomb of
 bees, axavS-ako-v trap, snare^ lat. squāma scale for^ squad-ma;

sansk. sthā, ti\$th-ati, inf. sthātum, stand, zend. histaiti stand, greek. ara-, ftrnjen
 stand, s-STTJ-V stand, lat. stā-, steti, statum stand, lit. sto-ju, sto-ti stand = lett. stā-ju, stā-t
 stand, stand, altsl. sta-n-a, sta-ti stand, ahd. sta-m stand, got. standan stand;

sansk. stak, stak-ati stemming, resisting, zend. gtakh-ra. stiff, firm, Greek öro/-
 o-s stake, goal, oxa/-u-?, a-5 "a/-u< stalk, ear, lit. stok-a-s stake, ahd. stoc, stocches
 stick, ahd. stah-al, mhd. stach-el steel;

sansk. sphurg, sphürg-ati to bristle, swell, greek.
 the sprouting, the shoot, crrapy-a-o), acpiy-do) strotze, lit. sprog-st-u, sprög-ti
 sprout, sprout, "become green", lett. spirg-t become fresh, gain strength, spirgta-s
 fresh and healthy;

sansk. sphurg, sphurgati thunder, roar, greek a^dpayo-; noise, ucpapays-ü)
 rausche, lit. spragu prassle, lett. spräg-t burst, burst, bang, ags. spreca, ahd.
 spröhhan speak;

sansk. sphal, sphul, sphalati wanken, Caus. sphälaja zu Fall bringen,
 griech. cftpdk-kco for^ a?ak-j<D Caus. bringe zu Fall, nach Curtius = lat. fallo, lit.
 pūlu, pūl-ti fallen, as. fallan, feil, ahd. fallan fallen, Caus. felljan fallen. ')

There are numerous cases in Greek where one and the same word
 sometimes shows the unaspirated tenuis, sometimes the aspirata, and these are
 precisely recorded by Curtius. "Thus the stem βXax," it says there,²) "appears in
 βXr^-po-?, aβXr^-po-¹¹⁵, the stem kex (cf. Xtxpicptc, where the <? prevents
 aspiration) in Xs/-p-to-c, the stem rpt in ftrptvac trident next to Tptva\$ aspirated,
 the suffix <po (dpo-rpo-v = aratrum) sometimes becomes &po (xkst-öpo-v -
 claus-tru-m), Tuv-b/po-; is to be compared in suffix with lud-i-cru-s. The Tpova*
 aydljiaxa pdjijara av&tva preserved in Hesych. is opposed by the Homer. Opova
 X 441 (sv ös öpova TtoxtX' SKaausv) (Hesych. av&7] xal xa sx /pmjidTmv
 mxtkpaxa). The same word also occurs in Alexandrian poets in the sense of
 <pdpp.axa herb and is certainly to be compared with sanskr. trna-s grass, herb,
 stalk, goth. thaurnu-s, altsl. trünü thorn." In referring to Curtius' further remarks, I
 only note that he also professes the view that the aspirata arose from the tenuis,
 either through the influence of a following liquida or nasal or through the
 influence of a preceding sibilant. However, the latter assumption is quite arbitrary
 and therefore completely unsuitable to support the assumption that aspirata is a
 more recent phonetic development on specifically Greek soil. How could it be

possible that a subsequent liquida or a nasal could have had an aspirational influence on

could perform a preceding tennis ? How would it be possible for a preceding sibilant to make an aspirate of a following tennis ? Here one has evidently allowed oneself to be deceived by the outward appearance of the linguistic facts and has completely overlooked the fact that the assumption based on this can neither be justified physiologically nor has any support in the history of language. Kräuter aptly remarks on the alleged aspirated influence of \$ on the following tennis:¹) "An aspirated influence of s on the following tennis is physiologically inexplicable; I also cannot imagine anything at all under the close connection of s to the percussive sounds assumed by Ascoli, which causes them to "detach" themselves from the self-sound and leave room for a breath; it is unbelievable that without any apparent reason an obvious increase has been allowed to occur in the heavy compounds sp, st, sk. If you consult the history of language, you will find numerous sure examples that s has protected p, t, k from aspiration or affrication, which has occurred everywhere else; I only remind you that in Germanic s has always protected a following tenuis from displacement; in High German the same process is repeated (only sk is an exception); in Modern High German the p, t, k of the conventional orthography always correspond to aspirates or affricates before a strong (stressed) vowel, especially if they are preceded by an s belonging to the same simple word: we say phas (pass), but spas (fun), - thäl (valley), but stäl (steel), etc. s. w. (s. Kuhns Ztschr. 1872, XXI. 40 ff.); in modern Greek θ has always become t after fricatives and has not passed over into and so on. That in the later Indian dialects sp, st, sk become pph, tth, kkh is due to conversion, as Ascoli has shown on the basis of the mh, nh regularly occurring there for sm, sn."

In addition, Curtius himself mentions a number of words that have the aspirata without any of the conditions under which, according to his assumption, the aspiration of tenues should take place. I mention, for example, βXεcp- apov (next to βXsK-Tto), the aspirated active perfecta, e.g. next to TTXSXO) AND SO ON.

Since the explanation of the aspiration of tenuis in Greek put forward by Curtius and other scholars is not tenable, one might perhaps be inclined to look for another explanation for this sound phenomenon in order to avoid having to give up the basic assumption that tenuis is the original sound and aspirata the heterogenous sound. One could perhaps think of looking for a linguistic simplification in the aspiration of the tenuis. However, this assumption should be rejected immediately for the simple reason that the pronunciation of the true aspirata - and the Greek aspirata is known to be such - is associated with greater effort than that of the simple tenuis, since the former consists of the tenuis in question and the following breath. Or should aspiration perhaps be attributed to the influence of the pre-Hellenic Semitic, later Aryanized indigenous population of Greece? However, this assumption is unlikely because the Semitic languages have not only aspirated but also non-aspirated tenses and it would be incomprehensible why the Aryanized Semite should have exchanged the tenuis he was familiar with for an aspirata. There is another point to be considered here, for the sake of which I have previously enumerated some such cases where the Sanskrit, or Zend, agrees with the Greek with regard to the aspiration of the tenuis. This correspondence cannot possibly be due to chance. But if it is not due to chance, it can only originate from the time when the Aryan Indians, Iranians and Hellenes still formed one people; but these peoples only formed an ethnic unity when they left their Scandinavian homeland and settled in the North German Plain (see p. 124). Here, however, their language could only have been influenced by peoples of the Ugro-Finnish group, who occupied the whole of Central Europe before the arrival of the Aryans. The languages of these peoples, however, do not know the aspirates and so the idea must also be rejected that a partial aspiration of the tenses took place at this time through the influence of Iranian elements.

So much emerges from these explanations that it is absolutely impossible to come up with a halfway satisfactory explanation of the tenses aspiratae in Sanskrit, Zend and Greek. The question then arises as to whether the whole basic assumption is not perhaps wrong, namely that the simple tenuis is the original and

i Aspirata is the sound that arose later. Kräuter has already described this

I question raised. "Are," he asks, "the reasons for the original

Iness of the unbreathed tenses compared to the tenses aspirates so decisive that there was no need to question the sound theory? What is this assumption based on? On Slavic, Lithuanian, Celtic, which in many other cases have demonstrably lost their aspiration; on Germanic, in which old tense aspirates were necessarily aspirated at the time when the originally pure tenses were aspirated.

' and were affricated had to coincide with these. So Slavic, Lithuanian, Celtic and Germanic languages are required to provide information on matters in which these languages cannot

decide anything!"

"Although most Indo-European idioms show mere final sounds in place of the Indian and Greek aspirates, the bh, dh, gh have nevertheless been recognized as more original. Could not those languages, in the pursuit of convenience, also have got rid of the tenuisa aspirates, in particular sph, sth, skh have been transformed into sp, st, sk?"

i I am not in the slightest doubt about answering this question with
i yes; indeed, I even go further and maintain that the basic Aryan language did not possess the non-aspirated tenses at all, but that it only knew the tenses aspiratae. This assumption is supported not only by the fact that in a number of cases Sanskrit, or Zend, in preference to Greek, preserved the tenuis aspiratae, but also, and in a decisive way, by Germanic, of which Kräuter wrongly says that it cannot decide anything. After all, it is the language of the Aryan people that remained in the original Aryan homeland the longest and experienced the influence of foreign languages the latest. Even today, most of today's Germanic idioms only have tenses aspiratae (kh, th, ph, imprecisely designated by k, t, p, see p. 29) and where pure tenses are found, the influence of an allophilic ethnic history can always be proven. The fact that pure tenses are heard very frequently in southern Germany and Switzerland today,²) is connected with this.

1) Kräuter, op. cit. 152.

2) Cf. Scherer, Zur Geschichte der deutschen Sprache 120.

Penka, Origines Ariacae.

11 that the Turanian element has gained numerical predominance over the Germanic element. Since today's Germanic peoples (Swedes, Norwegians, Danes, English, Dutch, Germans, especially North Germans) can lay the most justified claim among all Aryan peoples to being regarded as the descendants of the ancient Aryans who are least mixed with foreign elements, it seems quite justified to regard their phonetic habits as ancient Aryan phonetic habits in general and to deny the common Aryan basic language the possession of pure tenses.

We can do this all the more confidently as the transformation of the tenses aspiratae into pure tenses everywhere where it has been carried out almost without exception (in Latin, Celtic, Lithuanian, Slavic) can be explained very easily and without constraint by the influence of the Turanian (Ugro-Finnish) element of the population, whose languages, as already mentioned, the aspirates are quite alien to. What could be more natural than that the Turanian elements, after adopting Aryan, should adapt the sounds of it to their linguistic habits? And to the same extent that the ruling class of the Aryans declined numerically, so did the language of the subjugated people. As the ruling class of the Aryans declined numerically, the speech of the subjugated people became more and more important until it

finally attained exclusive validity. Thus it came about that in these languages we find an unaccented tennis everywhere where the pure Aryan had an aspirate. An interesting proof of my assumption is also to be found in the way in which the older Latin vernacular renders the Greek aspirates. Just as even today the Slave and Romani, as well as the Hungarian, when they learn to speak German, convert the German Aspirata into a pure Tennis and therefore pronounce, for example, the word Khönig as König, so it also happened in Latin that the Greek. Aspirata were regularly represented by the respective tenues. Thus Ooivi? became Poino-s, became Pilemo,

Ntx^cpopog

to Nicepor, iropcpöpa to purpura and so on. *) And what happened in historical times can also be assumed for prehistoric times, and all the more so since the brachycephalic (Turanian) element was already resident in Italy before the immigration of the first (Italic) Aryans and nothing is known of a later Turanian immigration. '

*) Curtius, Fundamentals of Greek Etymology 416

PHONOLOGICAL CHARACTER OF THE BASIC ARYAN LANGUAGE. 163 f



Since the Aryan Indians, Iranians and Hellenes, as has been shown earlier, had lived for a long time in Europe among Ugro-Finnish peoples before immigrating to their new homeland, it was inevitable that the latter's way of speaking would likewise exert its influence on the language of their Aryan masters. It was this ► influence which, as has been shown in the previous section, caused the transformation of the original k-sound into a sibilant in a number of Lithuanian-Slavic-Iranian-Indian words. And it is also this influence to which we must attribute the transformation of the original tenues aspiratae into unaccented tenues in Sanskrit, Zend and Greek. Thus it has come about that one and the same root in one and the same language sometimes shows the tenuis aspirata, sometimes the pure tenuis, and that the three languages mentioned sometimes coincide and sometimes diverge in this direction. It is also worth mentioning that the resulting double forms were often used to differentiate meanings.

But it is not only in Indian, Iranian and Greek that the original aspirata has been preserved in numerous cases, * Other Aryan languages also show the same, even if often only in its later transformation as spirans, which, as is well known, the Greek aspirata also became in later times. Thus in Umbrian h appears before t for the original kb, e.g. rehte = lat. recte, likewise in Oscan, e.g. ohtavis = lat. octavius, saahüm = sanctum¹). With Scherer²) I assume that Latin uter, ubi originated from^x huter,^x hubi and trace these forms back to^x khuter,^x khubi. In Old Irish, the aspirata or spirans has been preserved between vowels, e.g. cath (battle), gall. catu (e.g. in catu-riges Kampf mächtige), ech = lat.

equos, originally^x akhvas, deich = basic form^x dakhan, mǎthir = lat. māter (Greek p. [^]T7]p) = basic form^x mǎthar, then before t, e.g. nocht = noct (night) = basic form nakht, ^x ocht =. lat. octo. ³) Aspirated tenuis is also found in Osse- 1 tic, namely in the initial sounds: f, th, kh. According to Rosen's description, the latter two sounds are true aspirates, while the original ph has become f. In Armenian, however, this ph has been preserved unchanged in some cases, e.g. pheru vorm Jahre, oss. fāre, fāron, pers. pār, sanskr. parut, greek KSport, irspodt, mhd. vert, vere, vernet, lit. pernay; phur Feuer, greek ir5p, umbr. pir, osk. pur, ahd. fiur; phötur Feder - ahd. fedara, zend. ptara, greek TTtepov. We also encounter the inflectional suffix kh in Armenian, where other languages have k. In numerous cases, the first part of the double consonant of ph has been dropped completely and only the breath sound remains, e.g. hhajr, now usually hör (Old Irish athair (basic form^x phathar) has also lost the breath sound, cf. "the Latin uter, uhi), hhöri-wn,-un Ahle, Greek -rceповT].)¹

However, the most convincing proof for the correctness of the assumption that the Old Aaronic only knew tenues aspiratae lies in the Germanic, insofar as the Germanic spirants h, th, f have the aspiratae kh, th (probably to be distinguished from the spirants th) and ph as a necessary prerequisite and it is completely unfounded to assume that the aspiratae to be presupposed only developed from original tenues in the Germanic.

However, it is very striking that such a sound change (so-called sound shift) occurred in Germanic at all. And not only the aspiratae were transformed into spirants; the mediae (g, d, b) and mediae aspiratae (gh, dh, bh) were also shifted, the former to k, t, p, the latter to g, d, b. If at all in an Aryan people, then one should expect the unchanged continuance of the old Aryan consonantism in the ancient Germanic peoples. In fact, this fact has also been used to combat the hypothesis that the unmixed Germanic peoples are the direct physical descendants of the ancient Aryans in favour of the other hypothesis, which believes that the dark peoples of Asia and Europe are true Aryans. It was the well-known French linguist Chavde who made the following assertion at a meeting of the Paris Anthropological Society during the discussion of a lecture given by H. Martin on the Celts:²) "Il arrive fatalement que les gens qui ont fait anterieurement usage

*) Diefenbach, Völkerkunde Osteuropa[^]. II. 348.

²) Bull, de la Societe d'anthropologie de Paris. 2. ser. IX. 621. <Tune autre langue ne s'assimilent que difficilement et tres-mal une langue imposee et d autre gdnie que leur langue primitive. (Test ainsi que toutes les langues du rameau germanique sont des formes gätees et altdiAes de la belle forme aryenne. Si les populations germaines avaient ete aryennes, elles ne seraient jamais parvenues ä alterer la langue aryenne comme elles Font fait."

This objection does not have the significance that Chav[^]e attaches to it. For even the languages of those dark peoples who, according to his assumption, are supposed to

be true Aryans, show changes in their phonetic and formal systems that are just as significant as those of the Germanic peoples. Indeed, even a comparison of the currently spoken languages of these peoples (the modern Indian and Iranian idioms, the Romance and New Slavic languages) with Swedish-Norwegian, which is the first language to be considered here, leads to the conclusion that the latter has not departed as far from the sounds and forms of the basic Aryan language as is the case with the first-mentioned languages. For the rest, I refer to my remarks on this point on p. 147.

I have no hesitation in seeking the causes of the German sound shift - which Chavöe obviously had in mind at first - where, in my opinion, the causes of most sound changes in the area of the Aryan languages are to be found, in the influence of the allophilic ethnic strata, which were Aryanized wherever the Aryans were the dominant element. It is not to be argued that when the Aryans immigrated to Scandinavia they did not find an older population there, as has been pointed out on p. 69. But that such a population lived there in later times is fully proven by the skulls found in ancient graves (cf. 8. 70) and the Edda (cf. p. 22). Nor is there any doubt that this allophilic population element belonged to the Turanian race, namely the Finno-Lappish group of peoples. These Finns and Lapps may have entered the country mostly as prisoners of war and stolen slaves. That their numbers could not have been small is clear from the fact that they formed a separate class, namely the class of the unfree (ags. *thraelas*). They were responsible for performing menial labor. As today's

As can be seen from the type of Swedes and Norwegians (at least in the southern and central parts of the country, towards the north it appears mixed), mixtures between the Turanian and Aryan elements were in any case very rare, which in view of the great social distance should not appear conspicuous to us. However, this does not exclude the possibility that the Turanian element was able to exert a certain influence on the language of their Aryan masters. The cohabitation of children,²) the daily intercourse 'between master and servant could not possibly remain without effect over the centuries.

This assumption explains the German sound shift in the simplest possible way. It is known that the Ugric-Finnish idioms have neither the aspirated media nor the aspirated tenuis. We do encounter the unaspirated media there, but it is rightly believed that it was originally foreign to the language and replaces earlier tenuis.²) Can it surprise us then that under the influence of the Finno-Lappish element the Aryan media (g, d, b) became the tenuis (k, t, p)? After all, we observe that German loanwords are also subject to the same sound change in Hungarian, e.g. *pinter* (cooper, Austrian *binder*), *pek* (baker, Austrian *Beck*), *pldh* (tin).³) The German loanwords in the Romance and Slavic languages show a similar sound change,⁴) which is not striking in the ethnological composition of the Romance and Slavic languages. Furthermore, we cannot be surprised that the Aryan media aspirata (gh, dh, bh) became pure media (g, d, b) under the same influence. This pure Media

could all the more easily find its way into the language of the actual Aryans.

¹⁾ Tacitus, Germ. 20: "Dignum ac servum nullis educationis deliciis dignoscas: inter eadem pecora, in eadem humo degunt, donec aetas separet ingenuos, virtus agnoscat."

²⁾ Hovelacque, La linguistique 122; Fr. Müller, Grundriss der Sprachwissenschaft. II. 2, 161 and 189. Thomsen, Ueber den Einfluss der germanischen Sprachen auf die finnisch-lappischen 24 says about this: "Of *mütis* only k, t, p originally occur in the *Anlaute* and a Finn can only learn the understanding and pronunciation of the *mediae* g, d, b with the greatest difficulty."

³⁾ Bloch, Ungar. Grammar 12.

⁴⁾ For more detailed evidence, see Scherer, Zur Geschichte der deutschen Sprache 140. They were already familiar with it and its pronunciation required less effort than that of the aspirated media.

As far as the *tenuis aspiratae* (kh, th, ph) are concerned, the substitution of these sounds by the pure *tenuis* (k, t, p), which was initially to be expected, occurred only sporadically, which can be explained simply by the fact that the pure *tenuis* is a sound that is completely foreign to the Aryan consonant system and therefore its incorporation was naturally difficult. In those cases, however, where the unaccented *tenuis* were adopted, as in the compounds sk, st, sp for originally skh, sth, sph, the Finnish pronunciation prevailed, probably after a long period of vacillation, because it was impossible for the latter to assimilate these phonetic compounds in any other way. "What is striking," says Kellgren, ¹⁾ "(in Finnish) is the firmness of the sound combinations of s with k, t, p and of t with k; these sounds have grown together in such a way that k, t, p in these cases are usually not even subject to the otherwise invariable laws of softening in the final syllable of the stem." ^{116 117)}

In all other cases, where the Aryan *tenuis aspirata* seems to have become *tenuis*, there is probably only an inaccuracy in the spelling, just as in Modern High German in most cases the *tenuis aspirata* is rendered by the sign for the simple *tenuis*. However, the Finnish-Lappish element may have spoken the pure *tenuis*, as is also the case in many areas.

^{116*)} Kellgren, Die Grundzüge der finnischen Sprache. Berlin 1847, p. 42.

¹¹⁷⁾ The fusion of these consonants into one sound, as it were, is a consequence of the Finns' aversion to all consonant combinations. "In the *inlaut*," says Thomsen (preferring the influence of the Germanic languages on the Finnish-Lappish languages), "the law holds good that no genuine Finnish word can begin with more than one consonant; indeed, the pronunciation of several is, if not impossible for a Finnish organ, yet connected with a difficulty that is conspicuous to us." As a result of Finnish influence, the first of two consonants in the initial sound was often lost in the Aryan languages, while in the initial sound a vowel was sometimes inserted between them. This is the simple explanation of the well-known phenomenon of *svarabhakti* (p. 43). In Magyar this phenomenon also occurs in the initial vowel, e.g. Slav. *bratü* brother "barät, krall König =* *kiräly* and so on. Cf. Fr. Müller, Grundriss der Sprachwissenschaft. II. 2, 198. Examples of the insertion of a vocal in the middle of the word are given by Riedl, Ungar. Grammatik 9. Thus the Old Hungarian words *dolg* Sache, *hatalm* Macht are today *dolog*, *hatalom*.

Southern Germany is pronounced k, t, p under the influence of the same element, while northern Germans only speak kh, th, ph. However, this pronunciation will by no means have penetrated the echtaric circles. Grassmann has compiled several (12) of these cases, *) of which I will cite only two by way of example: ags. and Old Frisian met-an, met-a, English meet begegnen, from which ags. and Old Norse mōt encounter, meeting, from which again goth. ga-mōt-jan, Old Norse moeta, Old Norse motian begegnen; the t, as the Sanskrit meth, meth-e shows, goes back to th and will also have been pronounced th in the Aryan mouth. The same is true of the k in the Old Norse mac- jan machen, actually to join together, Old Norse maki, Old Norse gemaca, gemecea comrade, as is clearly shown by the Greek jnjx-og, jon.

Auxiliary means, pijfavq tool, machine, p^havaco to manufacture artificially.

As a rule, however, kh became h, th became th (I>), ph became f. The transition from kh to h and ph to f can probably be explained by assuming that the aspirates were first transformed into the affricates k^hf, pf. k^h and pf could easily become the simple spirants h and f either by assimilating k to jr and p to f and later simplifying the resulting double spirants or by dropping the initial tenues and volatilizing / to h. Spirants th, on the other hand, presupposes the mouillization of th, which initially became t, i.e. tj (cf. p. 144); as j then became s and this s merged with the t to form one sound, the toneless spirants th was created.

These toneless spirants h (<), th, f became toned spirants earlier in one idiom and later in another, and these in turn developed into mediae here and there. This was particularly the case with dental spirants. A similar course of development can also be observed in the Italic dialects.³) Gothic already shows us cases where the ancient tenuis aspirata corresponds to a media, e.g. fadar (basic form^x phathar), while the same-

¹) Journal for Comparative Linguistics. XII. 106.

²) Heinze], Geschichte der niederfränkischen Geschäftssprache. Paderborn 1874, pp. 147, 152 assumes Mouillirung for all three consonants (k, t, p). According to this, the process of sound displacement would have started with kj, tj, pj.

³) Ascoli, Vergleichende Lautlehre des Sanskrit, des Griechi sehen und des Lateinischen 143.

' formed brō "thar (brother) still shows the toneless spirants. Anglo-Saxon brodor shows the sounding spirants, Dutch broeder, on the other hand, the media as a further and final sound development. Similarly, goth. g and b for Old Aryan kh and ph, e.g. tager (teeth), Greek odxpu, Latin lacrimā for dacruma, sibun (seven), sanskr"_h sap-tan, Latin septem, Greek āfra.

Incidentally, it is worth noting that the shift from the original tenues (k, t, p) to spirants (/, h, s, z, f, v) can also be detected within the Ugri-Finnish languages. For example, finn. kunta collection wog. /ont corresponds to family, magy. bad (Acc. hada-t); finn. koto, koti dwelling ostj. köt, yät tent, magy. ház house; lapp. * käta, kät, ostj. ket, wog.

kät hand finn. käsi (käte-), magy. kez (Acc. keze-t); cherm. vüt, wog. vit, mordw. ved finn. vesi (vete-), magy. viz (Acc. vize-t) water; finn. puole middle, lapp. pele, wog. pfil, pal half, side, wotj. pal side, area, wog. pälä half magy. fal (Acc. fala-t) wall, fei (Acc. fele-t) middle; mordw. sapama, Sapam sour, finn. happame, tscherm. sopo sourdough magy. savö whey, cheese water, sa- vanyd. sour. n assessing this sound change, which would be difficult to explain as far as the tenues k and p are concerned, the first thing to consider is that some of the

words is undoubtedly of Aryan origin and is different from other such words.

! origin seems very likely. So it is easy to understand how

I original kh and ph on the one hand to k and p, on the other hand to y^h and f, v

² On the other hand, Tenuis t was able to develop in the manner described above (p.

168) f through the action of the parasitic j even in pure

ugro-Finnish words develop into s, z.

If there could still be any doubt that the cause of the German sound shift is to be found in the influence of the Turanian element, it is immediately dispelled if one extends the investigation to the second or High German sound shift. As is well known, the same phonetic processes that took place for the first time in the so-called Germanic sound shift were repeated in the latter, at least for the most part

*) Fr. Müller, Grundriss der Sprachwissenschaft, n. 2, 193.

²) The influence of Aryan on the phonetic character of the Ugric-Finnish languages cannot be denied. Thus the mediae (g, d, b), which have developed completely in individual languages, especially in Hungarian, are undoubtedly of Aryan origin.

had. Germ. kh, th, ph (denoted by k, t, p, but probably only spoken as pure tenues in Finnish) became ch (h), z¹), f (ph), germ. g, d, b became k, t, p, germ. th (Spirans) became d, while germ. h and f remained unchanged.

As has been explained in more detail on p. 101, the ethnological conditions of southern Germany and Switzerland today are such that the Turanian element is far more strongly represented there than the Germanic element and that, as a result, the population of the German south forms a marked contrast to the population of northern Germany, or rather Scandinavia and the Germanic countries situated next to it, where the Aryan-Germanic element has remained fairly pure to the present day. But even in the first centuries after Christ, when the beginnings of the High German phonetic shift occurred, the Turanian element must have been more strongly represented in the south than in the north. This assumption is supported by the fact that the invasion of Germanic tribes came from the north. A natural consequence of this was that the Turanian element, initially threatened in northern and central Germany, retreated to the south to seek protection from the advancing enemy in its mountains.

This explains why the second German phonetic shift began in the south and

only gradually spread to the north. "The movement," says Arnold¹) of this second phonetic shift, "takes the opposite course to the political one. It does not proceed from north to south like the latter, but from south to north and in this way successively seizes all tribes up to the border of the Low German or Low German dialects."

The Turanian element could all the more easily gain influence on the shaping of the language, as the victory of Christianity and the system of feudalism meant that the social-political contrast between the conquering and the subjugated elements of the population became more and more pronounced.

¹) The original *th* first became *tj*, from this *ts* ; from this *ts* developed on the one hand *z*, on the other hand by assimilation *ss* (3); cf. mhd. *diz*^ *ditze*, *di3* with goth. *thata*.

^a) Arnold, *Ansiedlungen und Wanderungen deutscher Stämme*. Marburg 1881, p. 225. weakened more and more. Nothing shows this more clearly than the fact that the purely Germanic skull shape is no longer found in the graves of southern Germany from the 9th century onwards, proof that the Germanic conquerors gradually began to mix with the subjugated brachycephalic element around this time.¹¹⁸) But even earlier, the latter could gain influence on the language, if one considers that admission to the monasteries was possible for everyone without distinction of descent and that the entire spiritual fiefdom of the time was ruled from these monasteries.

As is well known, the High German sound shift did not penetrate completely. It appears most completely in the language of the Alemanni and Bajuvars, i.e. in the language of those German tribes that had penetrated furthest south, where the Turanian element was and still is most strongly represented. Where the latter was less strong, consonantism has been preserved at least in part at the stage of the first sound shift (Central Germany).

From these considerations alone we can see that 'the greater part of the phonetic transformations in the area of the Aryan languages, both the old and the new, can be explained quite simply by the phonetic habits of the allophilic elements of the population, so that in this direction too the racial character presents itself as something unalterable. It is by no means a coincidence that in all those Aryan and non-Aryan languages of Central and Eastern Europe which are spoken by predominantly brachycephalic peoples, certain phonetic phenomena can be detected which are foreign to the languages of those peoples among whom the Old Aryan type has been preserved even less purely. The same causes had to have the same effects¹¹⁹) and where these causes were not effective, the effects

118*) H. von Holder, *Zusammenstellung der in Württemberg vorkommenden Schädelformen* 30.

119) Thus, the anthropological affinity between the northern Italians and the neighboring French explains the striking phenomenon that the northern Italian dialects often coincide with French and that they are closer to the neighboring dialects of France than to the dialect of Tuscany, which, as is well known, is the basis of the Italian written language. This is also explained by the

could not come to light. This much, however, necessarily shows that every phonetic investigation, if it is to be conducted correctly, must start from ethnology, in so far as it provides information about the anthropological composition of the people 'whose language is to be made the object of investigation.

that Sardinian, as has already been pointed out on p. 96, is closer to Spanish than to Italian in terms of phonetics. The well-known fact that French is pronounced more correctly and more easily by southern Germans than by northern Germans, a fact which has been wrongly associated with the method of teaching, also falls under the same aspect.

SEVENTH SECTION.

anthropological affinity between the Sardinians and the Spanish,

Morphological character of the basic Aryan language.

The Aryan and Semitic languages are known to be flexive languages and as such stand in contrast to all other languages of the globe, which are either isolating, such as Chinese and the Hindi languages, or agglutinative, such as the numerous languages of the Ural-Altaic group of languages and peoples. It is no coincidence that the morphological character of the Aryan and Semitic languages coincides with each other, since it is precisely the Aryan and Semitic races that are anthropologically closest to each other, i.e. they differentiated from each other the latest. It is highly probable that this similarity in morphological character, which is not accompanied by a similarity in linguistic material, is based on a certain similarity in the organization of the brain in both races. ') We can make this assumption all the more confidently because they also show striking similarities in other areas of mental life.

The question immediately arises whether the flexive character of Aryan has not been transformed by the influence of the Aryanized Turanian element in Europe and the Semitic and Dravidian elements in Asia, just as we have just demonstrated with regard to the phonological character. If the linguistic type belongs to the racial character, it is as such unalterable and it

Topinard (*L'anthropologie* 438) likewise comes to the conclusion "que- le type du langage est indpendant de la volonte de l'homme et le produit fatal da son organization cerebrale." Cf. also Bastian's remark quoted on p. 12. it can therefore be expected in advance that such morphological transformations really did take place, and to an even greater extent, as the non-Aryan allophilic element became numerically stronger and, as a result, its influence on the organization of language became greater.

These expectations are fully confirmed by the facts of linguistic history. However, in order to grasp them in their true meaning, it is necessary that we first determine the concept of inflection, to fathom its origin and nature, especially since it is precisely on this point that the greatest differences of opinion exist among linguists and no agreement has yet been reached. In order to reach the goal most reliably, I consider it most advisable to pursue the question in its historical course, even if I do not intend to give an exhaustive account of all the theories on the origin of inflection that have been put forward so far, however instructive such an account would be for a deeper understanding of the historical development of Aryan linguistics.

In his famous book "*Ueber die Sprache und Weisheit der Indier*" (On the Language and Wisdom of the Indians), Schlegel, without going into the actual analysis of forms, gave a definition of inflection which in more than one respect has remained remarkable and not without influence on later research. For him, inflection is nothing other than an internal modification of the root (pp. 33, 35, 41, 45); as such,

it is the complete opposite of agglutination, which indicates grammatical relationships through affixes. "Either the secondary determinations of meaning are indicated by internal alteration of the root-sound, by inflection; or else each, sometimes by a word of its own added, which already signifies in and for "I majority, past, a future shall, or other relational terms of the kind; and these two simplest cases also denote the two principal genera of all languages. All other cases, on closer inspection, are only modifications and secondary species of each of the two genera, hence this opposition also describes the whole, in view of the diversity of roots, immeasurable and

*) Fr. Schlegel, Ueber die Sprache und Weisheit der Indier. Heidelberg 1808.

i indefinable area of language and completely exhausted." (S. 45.)

* The view as if the endings of the flexival forms were replaced by

The hypothesis that the inflectional syllables originated from the addition of previously meaningful words is rejected out of hand. "In Greek one can still find at least a semblance of possibility, as if the inflectional syllables had originally arisen from the fusion into the word of the partitive and auxiliary words, although one could not carry out this hypothesis without resorting to almost all those etymological arts and jugglery to which one should first of all bid farewell without exception, if one wants to consider the language and its origin scientifically, i.e. quite historically; and it would hardly be possible to carry it out even then. In the case of Indian, however, the last semblance of such a possibility disappears completely, and one must admit that the structure of the language is entirely organically formed, ramified in all its meanings by inflections or internal changes and bending of the root sound, not merely mechanically composed by attached words and particles, where the root itself actually remains unchanged and barren" (p. 41). 41.) According to this view, therefore, all the formal elements of language have grown out of the body of the roots by a peculiar process, as the branches of a tree grow out of the trunk. This theory has often been ridiculed and it has been found incomprehensible how a man as intellectual as Fr. But as strange as this theory is as such, it is easy to understand how Schlegel came to formulate it. He had evidently started from forms in which the inner modification of the root appears as the bearer of a grammatical secondary meaning (e.g. *εXεmov* and *σXικov*) and it would have seemed to him an internal contradiction if he had put forward a different explanatory principle for the grammatical endings than for these forms. He himself says p. 35: "The essential thing is the equality of the principle." And so his theory emerged from the endeavor to gain a unified principle for the explanation of all inflectional forms and not to falsify the concept of inflection in itself by assuming affix formations. This endeavour was also aided by the figurative designation of indivisible sound complexes as roots, and so the above-mentioned theory emerged from a purely logical reasoning on the one hand and a play on words, which is not at all conspicuous in a Romantic, on the other.

It should also be mentioned that the well-known tripartite division of languages into isolating, affixing (agglutinative) and flexive languages can already be found in Schlegel's work. The first two types of language, of which the former is to be regarded as a preliminary stage to the latter, form the one main genus of languages, which stands in decided contrast to the second main genus (the flexive languages). (p. 44.) The same division was also accepted by his brother A. W. Schlegel: "Les langues," says the latter *), "se divisent en trois classes: les langues sans aucune structure grammaticale, les langues qui emploient des affixes et les langues à inflexions." Of the latter, he says that they use syllables "qui considérées séparément, n'ont point de signification." "On pourrait les appeler les langues organiques, parce qu'elles renferment un principe vivant de développement et d'accroissement, et qu'elles ont seules, si je puis m'exprimer ainsi, une Vegetation abondante et féconde." Within the third class, however, he makes a subdivision: "Les langues à inflexion se subdivisent en deux genres, que j'appellerai les langues synthétiques et les langues analytiques." The latter make use of auxiliary words (the article, personal pronouns, auxiliary tenses, prepositions, adverbs in the comparative and superlative) where the inflexive languages abstain from these means of paraphrase. But can analytic languages such as the Romance languages and English still be regarded as flexive? Do they not show all the characteristic features of the second type of speech, of which Schlegel himself says: "Le caractère distinctif des affixes est, qu'ils servent à exprimer les idées accessoires et les rapports en s'attachant à d'autres mots, mais que pris isolément, ils renferment encore un sens complet."

Bopp made the first real attempt "to explain the basis and origin of the grammatical forms of those languages that are most closely related to Sanskrit" in

*) A. W. Schlegel, *Observations sur la langue et la littérature Pro venrales*. Paris 1818, p. 14.

his "Conjugation System of the Sanskrit Language".^{120 121)} This epoch-making work is divided into five chapters and an appendix. The first chapter (pp. 3-11) deals - which should be noted - with "tense words in general." What Bopp presents about these is nothing other than a combination of the views generally held at the time and Schlegel's theory just presented, without, however, mentioning Schlegel's name or that of any other

120*) Bopp, *Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen, lateinischen, persischen und germanischen Sprache*. Frankfurt 1816.

121) Although Lassen (*Ind. Bibi. III. 78.*) has already recognized the untenability of the assumption that the so frequently recurring *s* goes back to the *verbum substantivum* as, the same is actually only rooted in the old logical grammar and it is also supported by the analysis of the Aryan verbal forms.

grammarians: "ünteil' Zeitwort oder Verbum im engsten Sinn ist derjenige Redetheil zu verstehen, welcher die Verbindung eines Gegenstandes mit einer Eigenschaft und deren Verhältnisse zueinander ausdrückt. The verbum, according to this definition, has no real meaning in itself, but is merely the grammatical bond between subject and predicate, through whose inner change and formation those reciprocal relationships are indicated. There is only one verb under this concept, namely the so-called verbum abstractum, Sein, esse (p. 3). And p. 6 continues: "The connection of the subject with its predicate is not always expressed by a special part of speech, but is concealed, and the relations and ' secondary determinations of the meaning are indicated by the inner change and inflection of the word expressing the attribute itself. Adjectives inflected in this way constitute the domain of time words in the ordinary sense." "Of all the languages known to us, the sacred language of the Indians shows itself to be one of the most capable of expressing the most varied relations and relationships in a truly organic manner by means of internal inflection and shaping of the root syllable. But despite this admirable flexibility, it sometimes likes to incorporate the verbum abstractum into the root, whereby the root syllable and the incorporated verbum abstractum then divide into the grammatical functions of the time word." 2)

We can see from this that Bopp, under the influence of the grammatical-logical views of his time, initially abandoned Schlegel's principle of the uniformity of inflection by asserting that grammatical forms could also have arisen through composition. This was a momentous step for the later development of Aryan linguistics. But it would be a mistake to believe that only the grammatical theories of his time led him to the assumption of compound forms. Perhaps even more than this, it was the analysis of forms itself that led him further and further away from Schlegel's theory, until he finally abandoned it altogether and attempted to explain all forms solely on the basis of the theory of compound or agglutination. It is of great interest and very instructive to follow this transformation process in its various stages. The opening words of the second chapter already speak clearly in this respect: "We shall here go through the tenses of the Indian temporal words one after the other, as they follow one another in the Sanskrit grammars, indicating with the greatest possible brevity and conciseness the reason for each change of form and describing the way in which each modification of the meaning corresponds to a separate modification of the word. It will become clear by itself that some tempora must be explained as compound. But as I can never base my assertions on foreign authority, since nothing has yet been written about the origin of grammatical forms, I must substantiate them with cogent evidence." Nor does it agree at all with Schlegel's theory when it is said that the tempus praesens is formed from the root "by the mere addition" of the "person markers" - M for the singular and plural of the first person, S and H for the second, T for the third person -> or that the modus potentialis is formed by the

"insertion" of a long i. The past should be expressed in the first past tense by a short A "prefixed" to the stem syllable and it is explicitly added

is not confirmed insofar as many of them show no trace of this as, Bopp held on to it and it is still counted among the certain results of Aryan linguistic research.

I added that the outputs of the personal identifiers contribute nothing to the characterization of the temporal relationships, it is only the augment, | whereby the past is expressed and as more than

It should be considered coincidental that, for example, the M and T of the first and third person in the present tense are emphasized by a "trailing" i and in the past tense ■ by a "preceding" a.

The preterite (e.g. to hear a<?rauṣam from the root 9m) is explained in line with the assumptions made in the first chapter. The past is indeed denoted by the augment, but the special modification of it by intensifying the stem sound (u in au); moreover, the Indian language tends to incorporate the verbum abstractum (as) into these preterites, "so that, after the time relations have been expressed in a purely organic way by the inner inflection of the root, person and number are determined by the modification of the auxiliary time word attached" (p. 18). An attempt is made to explain how fisam (= a asam) could become sam by pointing out that the a of the root as is often omitted in conjugation (santi for asanti) and that it is self-evident that the a of the augment must be omitted because the time relationship is already indicated by > the inner formation of the root syllable, and the

The second preterite can only denote persons and numbers. Bopp regards it as incontrovertible proof that this s in connection with the second past tense really constitutes a word of its own that it can have the reduplication, e.g. adhfisiSam I drank; adham would express exactly the same thing (p. 23). Likewise, he declares the syllable sjā, by the addition of which the second future tense is formed, to be the future tense of the root as, which no longer occurs in isolation and whose j is identical with the potential i. The reasons for his view are noteworthy: "In the Indian tense words, all relationships and secondary clauses are expressed by an internal inflection of the stem syllable or by a vocal incorporated into the verb or indicated by a change in the ending. It is contrary to the spirit of the Indian language to express any relation by attaching several letters "which can be regarded as a word of their own" (p. 30). The last words in particular clearly show that Bopp is still reluctant to accept the final consequences of the theory of composition - 12*

the assumption of originally meaningful words - although he otherwise no longer makes rare use of it. We find him in the same halfway way in the explanation of medial endings. "The Indian temporal words have a special form to indicate the effect of the action expressed by the root on the subject itself. This is done by strengthening or lengthening the personal endings. Short final vowels are transformed into diphthongs, or the syllable *hi* or *hae* is added to them as an extension, or a long *a* is placed in front of the personal endings, or *a* or *ae* is added to the silent consonants, e.g. *Bhavati* - *Bhavatae*, *Bhavāmah* - *Bhavamahae*, *Abhavat* - *Abhavata* - *Abhavatām* - *Abha- vātām* - *Abhavāva* - *Abhavāvahi*" (p. 36). On the other hand, Schlegel's influence is still clearly evident in this attempt at an explanation, insofar as *e* in *te*, for example, is understood as the "intensification" of the personal ending *ti*, an explanation which Bopp himself later abandoned when he had completely emancipated himself from Schlegel's theory and replaced it with another interpretation given in the spirit of the agglutination theory.

These explanations should suffice to show that Bopp started from two general theories that are different from each other and that he was significantly influenced by them in his analysis of verbal forms. He was therefore by no means, as has often been claimed, a pure empiricist, even if it cannot be denied that he mostly arrived at overcoming Schlegel's theory by empirical means and establishing the agglutination principle. We already see him halfway there in the five chapters of his first work. The decisive step was not long in coming; he already took it in the "Supplement" to the "Conjugation System", where he wrote the remarkable words on p. 147: "It no longer seems to me to be subject to any doubt that the letters which I used to call signs of persons in this experiment are real pronouns. This could already be surmised from the Greek and Latin languages; in my opinion, knowledge of ancient Indian makes it certain." "If the genius of language has, with careful caution, represented the simple terms of persons with simple signs, if we, because of its wise economy

' the same terms in time and pronouns in the same way

t , it is clear from this that the letter originally

I had a meaning and that it remained true to its original meaning. If

there was once a reason why *mām* is called *me* and *tarn* him and not the

latter *me* and the former *him*: so it is

certainly for the same reason that now *Bhavami* means *I am* and *Bhava* means *he is* and not vice versa. If, on account of the manifold secondary concepts which it has to express by means of significant inflection, the tense was not able to express the all-important concepts of persons by its own means - by internal inflection - if

it had to add to itself signs whose meaning left no room for doubt: then it could rightly choose no other letters than those which, since the origin of language, have represented with complete clarity the concepts to be expressed by it/.⁴

These words contain a complete explanation of the agglutination theory.

Even if it was initially only applied to personnel

Endings, it was so full of evidence that it should come as no surprise to anyone that it soon became the basis for all explanations of forms in general.

According to this theory, how simple the process of the formation of linguistic forms appeared compared to the ambiguity of Schlegel's theory! Meaningful words attached to stems in their original meaning - who would not immediately realize this? It is necessary to draw particular attention to this starting point of the agglutination theory, since the identity of the personal endings with the personal pronouns, or rather their stems, has always been regarded as its main support and all attacks on it were initially always dismissed with reference to this indisputable identity. Even though in most cases it seemed difficult, even impossible, to arrive at a halfway satisfactory explanation on the basis of this theory, it was nevertheless believed that it could not be abandoned for this single reason.

Neither Bopp nor Pott and Benfey have succeeded in explaining the Aryan inflectional elements satisfactorily on the basis of * this theory, since their explanations are subject to all objections either from the side of the development of meaning or from the side of the development of sound. Schleicher's explanations could not satisfy either¹), since in his analysis of the Aryan form system he limited himself to the phonetic reconstruction of the inflectional elements and almost completely neglected the functional side of these, whereas it is precisely the latter that is most important here.²) If, nevertheless, the agglutination theory still enjoys the most adherents today and all other theories that have been opposed to it, such as Westphal's evolutionary theory or A. Ludwig's adaptation theory, have so far been able to gain little acceptance, the reason lies in the fact that they have been rejected not only by the authority of the founder of Aryan linguistic research, but also by the authority of the greatest philosopher of language -

²) A detailed historical-critical account of all previous attempts to explain the elements used in stem and case formation can be found in my *Indogerm. nominalflexion* 1 - 119.

²) Ludwig (*Agglutination or Adaptation?* Prague 1873, p. 41) aptly remarks with regard to the method of Schleicher and his school: "Whether we explain mai, sai, tai from mami, sasi, tati or from maki, saki, taki or from God knows what, is always only of secondary importance compared to the general question: are ma etc. identical with their

meaning or merely carriers of it? Not as if the greatest possible accuracy and completeness were not desirable, but because general understanding must be more important to us than the knowledge of a detail that is often only made possible by mere chance. If someone were to reconstruct for us the forms of language that have changed over the millennia in a completely correct mechanical and phonetic way, but on the basis of false views about the course of development as a whole and on a large scale, we would have a result concerning phonetics that would do nothing for our knowledge of the inner, spiritual moments in the development and formation of language." Schleicher's procedure essentially amounts to the same thing as if a philologist wanted to reconstitute a writer's text according to exclusively palaeographic indications without regard to the meaning. Anyone would call this foolishness; in modern linguistics, however, a similar procedure is practiced daily. Therefore, if this process has no analogy in the history of classical philology, the earlier method of linguists (Bopp et al.) can be appropriately compared with the old method of philologists. Just as the one was initially only interested in the meaning of the passage, the other was only interested in the real or supposed meaning of the linguistic form; the text was then restored and the basic form reconstructed. Little attention was paid to the palaeographical possibility in the one case and to the phonetic possibility in the other.

W. v. Humboldt - is borne. We must therefore look at the latter in more detail in order to see how hesought to justifyit I . We can look forward to this all the more eagerly

t must be that no one, neither before him nor after him, has combined such a comprehensive knowledge of language with such a deep philosophical and historical education as was the case with W. von Humboldt.

Firstly, his treatise: "Ueber das Entstehen der grammatischen Formen und deren Einfluss auf die

development of ideas." ^x) Humboldt explains right at the outset that he does not ' limit himself to going through the individual genres of grammatical forms. but to limit it to the concept of grammatical form, "in order to answer the double question:

How does the type of grammatical relationship that deserves to be called a form come about in a language?

To what extent is it important for thinking and the development of ideas whether these relationships are designated by real forms or by other means?"

■ - "Since we are talking here about the gradual development of grammar is, the differences of language, viewed from, this side, present themselves as stages in its progression.
? "

His whole theory of the origin of grammatical forms takes its point of departure from this proposition, which is put forward without any justification, and from it alone the many errors and inconsistencies of the same must, as it were, emerge with inner

necessity. The question of whether a language is to be regarded as standing on a higher or lower level of perfection is not decided, it continues, "by what can be expressed in a language, but by what it inspires and inspires from its own inner power. Its measure is the clarity, definiteness and activity of the ideas that it awakens in the nation to which it belongs, through whose spirit it is formed, and on which it has in turn had a formative effect." "Also

' if the language has no genuine grammatical forms, it can, since it never lacks other ways of designating the grammatical forms of the language.

¹⁾ Abhandl. der hist. - philol. Classe der Berlin. Academy. 1822-23. Berlin 1824, pp. 402-430. Ges. Werke. III. 269-306.

In the absence of grammatical relations, not only does speech exist quite well as a material product, but perhaps every genre of speech can be transferred into such languages and formed in them." "For the reason that all grammatical relations can be indicated by the names of almost every language, not every language possesses grammatical forms in the sense in which they are known in highly educated languages. The subtle but nevertheless very perceptible difference lies in the material product and the formal influence." "In a language not thus grammatically formed, the mind finds incompletely and imperfectly developed the general scheme of verbal connection, the adequate expression of which in language is the indispensable condition of all easily successful thought. Whatever may be said of the appropriateness of a language that is not grammatically formed in this way for the development of ideas, it always remains very difficult to understand that a nation should be able to achieve a high level of scientific education by itself on the unchanged basis of such a language."

Humboldt thus takes the standard for judging the greater or lesser perfection of a language not from whether its grammatical structure is more or less suitable for fulfilling its actual purpose, the easy and secure communication of speakers among themselves, but from its alleged suitability for the development of ideas, i.e. from whether it is in itself capable of stimulating and promoting scientific thought and thus having a stimulating effect on the cultural development of a people. According to this theory, it is therefore permissible to infer from the cultural development of a people the greater or lesser perfection of the grammatical formation of the language spoken by that people; indeed, it is the only basis for such an assessment. But if one compares the languages of individual peoples with the state of their culture, striking contradictions arise which alone are sufficient to reject as unfounded the assumption of a mutually

dependent parallel development of scientific ideas and grammatical formation.

How was it possible that the Chinese, whose language occupies the lowest level in Humboldt's developmental scheme, were able to develop this language?

high cultural level on which they have long stood, while other peoples of the same race, such as some Finnish-Ugric tribes, whose languages, according to this view, should be placed morphologically higher, have not yet progressed far beyond the beginnings of all culture? And what Humboldt, who is not unaware that the Chinese, with their literature that has flourished for thousands of years, as well as the ancient Egyptians with their high scientific education, could be cited as evidence to the contrary, also shows only too clearly how little sense it makes to draw any compelling conclusions from the cultural development of a people to the development of the grammatical formation of its language. After all, he himself considers it possible that "the human mind, where it works through a coincidence of favorable circumstances with a fortunate exertion of its powers, reaches its goal with every tool, albeit by a more laborious and slower route^{44 x}).

¹⁾ Sayce aptly remarks, *Introduction to the Science of language*. I. 374 on the question of the greater or less perfection of a language in general, and with regard to the literature of a people in particular: „We are apt to assume that inflectional languages are more highly advanced than agglutinative ones, and agglutinative languages than isolating ones, and hence that isolation is the lowest stage of the three, at the top of which stands flexion. But what we really mean when we say that one language is more advanced than another, is that it is better adapted to express thought, and that the thought to be expressed is itself better. Now, it is a grave question whether from this point of view the three classes of language can really be set the one against the other." "The masterpieces of Greek, or Latin, or Sanskrit literature have produced the impression that the languages which embody them must surpass all others as instruments of thought. But such an impression may, after all, be an incorrect one. English literature stands on quite as high a level as the literature of the classical tongues. The English language is quite as good an Instrument of thought as Sanskrit or Greek, and yet English can hardly be said to be inflectional in the way that Sanskrit and Greek are." Madvig expresses a similar opinion in his excellent treatise *"Vom Entstehen und Wesen der grammatischen Bezeichnungen"* (Kleine philolog. Schriften. Leipzig 1875, p. 279): "The conclusion that precisely because the peoples have remained at a low level of culture, the language must be incapable of being developed in grammatical form in such a way that a culture can find expression in it, contains a *petitio principii* that is far too poor." "The vast majority of common judgments about European cultural and literary languages are based on sympathies and antipathies for or against the peoples and their cultural states; one should not expect a distinction between what is lexical and what is really grammatical."

"The Sanskrit language is the oldest and first among those known to us which possesses a true construction of grammatical forms, and indeed in such excellence and completeness of organism that in this respect only a little later has been added to it; the Semitic languages stand beside it; only the highest perfection of construction has indisputably been achieved by the Greek" (p. 306).

But what phases did Greek go through before it reached the peak of grammatical development? How is it morphologically related to the other, supposedly lower languages? And such a connection is expressly assumed in the very first sentence. Humboldt now believes he can establish this connection by assuming that the genuine grammatical forms also arose in the same way as the spurious forms of the cruder languages, namely through the addition of significant syllables (agglutination). And indeed, the hypothesis that there is an inner connection between inflection and agglutination cannot be made plausible in any other way than through this assumption. The traces of the cruder construction, Humboldt believes, are still visible in all higher-order languages; in addition, this mode of development (through agglutination) must have been almost the general one. This emerges very clearly from the enumeration of the means which language possesses to designate these forms. "For these means consist in the following:

Addition or insertion of significant syllables that have otherwise constituted or still constitute separate words.

The addition or insertion of 'meaningless' letters or syllables merely for the purpose of suggesting grammatical relationships.

Transformation of the vocals by changing one into the other or by changing the quantity or stress.

Change of consonants inside the word.

Position of interdependent words according to invariable laws.

Syllable repetition.

The mere position allows only a few changes and, if any possibility of ambiguity is to be avoided, can only indicate a few relationships." "The addition and

The insertion of meaningless word elements and the alteration of vowels and consonants would be the most natural and appropriate means if a language were to be created by real agreement. It is true inflection as opposed to addition, and there can be words which correspond to " concepts of forms as well as to concepts of objects. We have even seen above that the latter are basically unsuitable for designating forms, since such a word wants to be linked to the others by a form. It is difficult to imagine, however, that such a mode of designation ever prevailed at the origin of a language, which would have allowed a clear

This would presuppose an understanding and differentiation of the grammatical

relationships. In the case of words that denote things, the

concept through the perception of the object, the sign through the analogy that can easily be drawn from it, the understanding through demonstration of the same. With the grammatical form all this is different. It can only be recognized, designated and understood according to its logical concept or according to a dark feeling that accompanies it. Some forms of designation may well have arisen from feeling, such as the long vowels and diphthongs, " thus a more persistent floating of the voice in Greek and

German for the conjunctivus and optativus. But since the entirely logical nature of the grammatical relations allows them only very few relations to the imagination and feeling,

I so these cases can only have been a few. The E r-

Experience speaks against the originality of inflection in languages, if one excludes a few cases similar to those just mentioned. For 'as soon as one begins to dissect a language more precisely, the addition of significant syllables becomes apparent on all sides and where it can no longer be proven, it can be inferred from analogy or at least it always remains uncertain whether it was not previously present."

"In addition to agglutination and inflection, however, there is also a ! third, very frequent type of formation which, since it is always *intentional* , must be placed in the same class as inflection, namely where the usage stamps a word form exclusively as a certain grammatical one, without it having anything characteristic of this particular grammar, either by addition or inflection."¹¹

"The repetition of syllables is based on a dark feeling aroused by certain grammatical conditions. Where this involves repetition, intensification, extension of the term, it takes its place. Where this is not the case, as so often in some American languages and in all verbs of the third conjugation in Old Indian, it arises from mere phonetic peculiarity. The same can be said of the vocalic change. In no language is this so frequent, so important and so regular as in Sanskrit. But only in very few cases is the characteristic of grammatical forms based on it. It is only connected with certain of them, and then usually with several at the same time, so that the characteristic of each must be sought in something else."

Accordingly, grammatical forms have a threefold origin: they have received their grammatical meaning either through the addition of a significant syllable or through the phonetic transformation of a word in order to symbolize the grammatical form or through usage. As far as the first mode of origin is concerned, it has undoubtedly taken place in all languages, thus also in the flexive ones, and Humboldt rightly opposes that opinion (Fr. Schlegel's) "which ascribes to certain

peoples from the first origin a language formation which progresses merely by inflection and inner development, and denies to others all formation of this kind.⁴⁴

It is a different question, however, whether all endings - and these are the main ones under consideration here - are of agglutinative origin in the sense that they have been added to the word from the very beginning by virtue of their original meaning. To decide this question, an analysis of the grammatical forms of each language was indispensable, especially since Humboldt himself had recognized the difficulties that stand in the way of tracing genuinely inflectional suffixes back to meaningful syllables. Even if he was right to declare the assertion "that the presupposition of suffixation, where it can no longer be proved, is an empty and inadmissible hypothesis," to be decidedly incorrect with regard to Schlegel's assumption that the grammatical endings sprouted from the root of the word, it does not at all follow from this that they were added by virtue of their own original meaning.

Humboldt overlooked or deliberately ignored this fact in order not to cut off the only possible bridge through which the connection of inflection and agglutination that he a priori assumed could be achieved. After all, all grammatical systems appear to him only as different phases in the development of language to the highest perfection, which in his opinion it has reached in the inflectional form.

The second assumption, that in individual words the grammatical form has been symbolically designated by deliberate transformation of the phonetic form, is based on the false view of the influence of the speaking person on the formation of the language as such.^x) It is an integral part of Humboldt's* view of language and is rooted in his view of the nature and origin of language. If the language is also a product of the human mind, then this only applies to the conceptual side of it, not at all to the phonetic side. All phonetic transformations take place unconsciously and completely unintentionally; their origin is physiological, not psychological. They sometimes, but by no means always, enter into the * service of thought and are used by it for the purpose of

grammatical term is used. However, this always happens 'later', not simultaneously, as is still evident in many cases from the

linguistic history. Some cases will be discussed later. Incidentally, this view of the influence of the human mind on the sound form of a word also played an important role later in the history of linguistics. The so often made assumptions of a differentiation of a sound form for the purpose of meaning- ' i f f e r e n c i n g go back to the same. However, they are no different

as Humboldt's assumption of a sound transformation for the purpose of the symbolic designation of a grammatical relationship.

I) Thus says Humboldt, Ueber die Verschiedenheit des menschlichen Sprachbaues 81 of Pott's edition: "Articulation is based on the power of the spirit over the tools of language to transform them into a form of its spirit. I speaking treatment of the sound."

Related to this is the third way in which grammatical forms are created through usage. Humboldt's first focus here is on syllable repetition and vocalic change. As he is unable to explain from his basic viewpoint the fact that sometimes vocalic changes and reduplications take place without a change of concept, he regards them as arising from mere "phonetic peculiarity," without, however, saying in what this phonetic peculiarity consists. Incidentally, only in very few cases is the characteristic of grammatical forms based on the vocalic change. But at least in some cases, Humboldt has to admit, and it would be interesting to see how it came about that such a grammatical function could be attached to the vocal change. The proposition that usage sometimes stamps a word form with a certain grammatical function contains only the fact, but by no means the explanation of it.

The grammatical words (prepositions and conjunctions) are then discussed, "to which most of what applies to forms can also be applied. As designations of grammatical relations, the origin of these words as true signs of relation is opposed by the same difficulties as the origin of the forms. The only difference lies in the fact that they cannot all be derived from mere ideas like the pure forms, but must use concepts of experience such as space and time According to Horne Took's more correct theory, all of them presumably have their origin in words denoting real objects."

But if this is the case - and it must be assumed as certain for the prepositions - how is it that in the Aryan languages, whose endings Humboldt also traces back to words that denote "real objects", the prepositions, despite serving the same purposes as those, have lost neither their accent nor their basic material meaning? The fact that this did not happen shows best that his assumption that the inflectional endings are basically nothing more than agglutinative formations was not justified.

At the end (p. 296) Humboldt summarizes his views on the emergence of grammatical forms as follows:

"Language originally designates objects and leaves it up to the person who understands to think of the forms that link them.

However, it seeks to facilitate this addition through word order and through words for objects and things that indicate relationship and form.

Thus, at the lowest level, grammatical designation takes place through idioms, phrases and sentences.

This aid is brought into a certain regularity, the word order becomes constant, the words mentioned gradually lose their independent use, their factual meaning, their original sound.

Thus, at the second stage, grammatical designation takes place through fixed

word positions and words that fluctuate between factual and formal meaning.

The word positions gain unity, the form of significant words is added to them and become affixes. But the connection is not yet firm, the joints are still visible, the whole is an aggregate, but not one.

Thus, at the third stage, grammatical designation is achieved by analogies of forms.

The formality finally penetrates. The word is one, modified in its grammatical relations only by an altered inflection; each belongs to a certain part of speech and has not merely lexical, but also grammatical individuality; the words denoting form no longer have any disturbing secondary meaning, but are pure expressions of relations.

Thus, at the highest level, grammatical designation occurs through true forms, through inflection and purely grammatical words.

The essence of the form consists in its unity and the predominant rule of the word to which it belongs over the secondary sounds attached to it. This is probably facilitated by the loss of meaning of the elements and the grinding down of the sounds in long usage. But the origin of language can never be explained entirely by such a mechanical effect of dead forces, and one must never lose sight of the influence of the strength and individuality of the power of thought. The unity of the word is formed by the accent. This is in itself of a more spiritual nature than the accented sounds themselves and it is called the soul of speech, not only because it brings the actual understanding into it, but also because it really becomes more directly than anything else in language the breath of the sensations accompanying the soul. It is also this where it stamps words into grammatical form through unity."

The great merit of this treatise lies in the fact that Humboldt first made a distinction between genuine grammatical forms and forms which, although fulfilling the same purpose, cannot be regarded as genuine forms in the sense in which the Aryan and Semitic languages possess them. However, by regarding inflection as a more highly developed form of agglutination, he falsified its concept in itself and thereby caused the correctly identified difference between the two types of formation to be disregarded in attempts to explain the Aryan language forms. And yet the difference between flexive and agglutinative language forms can still be clearly recognized in the historical period from the difference in meaning and usage. A further consequence of this misguided assumption was that he had to adopt different explanatory principles (symbolic designation, mere usage) for the other types of flexival designation (reduplication, consonantal and vocalic sound change, change of accent and quantity), thus making it impossible

for him to find a unified principle for explaining them, a unified principle for the explanation of the origin of inflection, apart from the fact that he was forced to exclude the purely formal means of word order from the means of genuine grammatical designation because of the position which Chinese had to be given within the framework of his classification scheme on the basis of his theory (p. 278).

Passing over the supplementary continuation of this treatise in his letter to Abel-Rémusat¹²²) (published in 1827), I turn to the final version that Humboldt gave to his views on this subject in the chapter "Flexion and Agglutination" of his famous magnum opus: "On the Diversity of Human Language and its Influence on the Intellectual Development of the Human Race"²). It is highly interes-

122 "Lettre a Mr. Abel-JRemusat, sur la nature des formes grammaticales en general et sur le genie de la langue Chinoise, par Mr. W. de Humboldt. Reprinted in Humboldt's works. VH. 294-381.

²) First printed in 1836. VI. 1-425.

sant to see the mighty genius wrestle once more with the difficulties of the subject, which one would have thought he had finally overcome.

Starting from the well-known threefold division (isolation of words, inflection and agglutination), he first remarks the following: "In all the cases summarized here, the internal designation of words involves a double process whose quite different nature must be carefully separated. For in addition to the act of designating the concept itself, there is a separate work of the mind which places it in a certain category of thought or speech; and the full meaning of the word emerges simultaneously from this conceptual expression and this modifying allusion. These two elements, however, lie in quite different spheres. The designation of the concept belongs to the increasingly objective process of the sense of language. The transfer of the concept into a certain category of thought is a new act of linguistic self-consciousness, through which the individual case, the individual word, is related to the totality of possible cases in language or speech. Only through this operation, accomplished with the greatest possible purity and depth, and firmly incorporated into language itself, does its independent activity, which springs from thought, and its activity, which follows external impressions in pure receptivity, unite in the latter in the appropriate fusion and subordination."

After observing that the different languages satisfy this requirement to varying degrees, he distinguishes precisely composition, where two elements form a compound term, from inflection, which differs from the former in that "not two elements at all, but only one, placed in a certain category, constitutes the double from which we proceed in determining this term. The fact that this double, when separated, is not of the same but of different natures and belongs to different spheres, is the characteristic feature here."^w

The origin of inflection is then explained as follows: "In the language-forming periods of nations, what is vividly felt in the spirit always finds expression in the corresponding sounds. Therefore, just as the feeling of

The necessity arose of adding a double expression to the word according to the needs of changing speech or its permanent meaning, regardless of its simplicity, and so inflection arose in the languages from within. But we can only pursue the opposite course, only penetrate from the sounds and their dissection into the inner sense; here now, where this property is developed, we find in fact a double, a designation of the term and an indication of the category into which it is placed. For in this way we can perhaps most definitely distinguish the twofold endeavor to stamp the concept at the same time and to give it the mark of the kind in which it is to be thought. The difference of this view, however, must emerge from the treatment of the sounds themselves." "There are only two ways in which the word

can be transformed: by internal change or external addition. Both are impossible where the language locks all words rigidly into their root form without the possibility of external growth and also leaves no room for change within itself. Where, on the other hand, internal change is possible and is even promoted by the construction of the word, the distinction between allusion and denotation is easy and infallible. For the intention inherent in this process, to preserve the identity of the word and yet to show it as differently formed, is best achieved by the inner alteration. The situation is quite different with external addition. It is always composition in the broader sense and no entry should be made here for the sake of the simplicity of the word - two terms should not be linked to form a third, one should be thought of in a certain relationship. A seemingly more artificial procedure is therefore necessary here, which, however, emerges automatically in the sounds through the vitality of the intention felt in the mind. The insinuating part of the word, with the acuteness of sound which it contains, must appear to be placed on a different line from the insinuating part; the original insinuating sense of the addition, if it had any, must be lost in the intention of using it only insinuatively, and the addition itself, connected with the word, must be treated only as a necessary and independent part of it, not as capable of independence in itself.

If this happens, a third transformation of the words by formation arises outside the inner change and the composition, and we then have the true concept of a suffix. The continued action of the mind on the sound then automatically transforms the composition into formation. In both > there is an opposite principle. The summary is for the

The preservation of the multiple root syllables in their significant sounds, the formation strives to destroy their meaning, as it is in itself; and under this opposing treatment, language here achieves its twofold purpose by preserving and destroying the recognizability of the sounds. Composition only becomes obscure when, as we have seen in the foregoing*, language, following another sentiment, treats it as a formation. I have, however, mentioned the composition here more because the formation could have been mistaken for it than because it really belongs to the same class with it. This is always only apparently the case; and in no way should the formation be thought of mechanically, as a deliberate linking of what is separate in itself and smoothing out the traces of connection through word unity. The word formed by formation is just as one as the different parts of a budding flower are; and what takes place here in language is purely organic in nature."

"However clearly the pronoun may be attached to the person of the verb, in genuinely flective languages it was not linked to it. The verb was not thought of separately, but stood before the soul as an individual form, and in the same way the sound passed over the lips as one and indivisible. Through the inscrutable self-activity of language, the suffixes break out of the root and this happens as long and as far as the creative capacity of language is sufficient. In order not to violate the truth of the real process and not to drag language down to a mere process of stowage, one must always keep in mind the last mode of conception chosen here."

Do not the latter words mean a complete relapse into Schlegel's theory of the "organical" origin of inflection, which he had previously fought against? Are they not an abandonment of his earlier views based exclusively on the assumption of "mechanical" composition? But immediately afterwards he says, the 13*

But one must not conceal from oneself that precisely because it goes to the inexplicable, it explains nothing, that the truth lies only in the absolute unity of what is thought together, and in the simultaneous emergence and symbolic agreement of the inner idea with the outer sound, but that it incidentally veils the darkness that cannot be illuminated under figurative expression. For even if the sounds of the root often modify the suffix, they do not always do so, and it can never be said otherwise than figuratively that the latter bursts forth from the root. This can only ever mean that the mind thinks them inseparably together and the sound, following this thinking together, also pours them into one before the ear. I have therefore preferred the presentation chosen above and will retain it in the following pages." Nevertheless, the inner contradiction between the two views, one of which is rooted in speculation, the other in empiricism, remains, and he has not succeeded in internally merging the results of the latter, which point to composition, with the demands of the former, which urges the assumption of original unity.

The following sentences also show the same struggle between theory and empiricism and how he was repeatedly forced to abandon the former in favor of the latter. "The suffix indicates the relation in which the word is to be taken; it is therefore by no means meaningless in this sense. The same is true of the inner change of words, that is, of inflection in general. The important difference between the inner change and the suffix, however, is that the former cannot originally have had any other meaning, whereas the added syllable usually has. The inner change is therefore always symbolic, even if we cannot always put ourselves in the feeling of it. In the nature of the change, the transition from a lighter to a darker, a sharper to a more elongated sound, there is an analogy with what is to be expressed in both cases. The same possibility applies to the suffix ob. It can just as well be originally and exclusively symbolic and this property can then lie solely in the sounds. But it is by no means necessary that this should always be the case; and it

I is an incorrect misjudgment of the freedom and multiplicity of the
! Paths that language takes in its formations, if one only
wants to call those syllables that grow into inflectional syllables, to which no
independent meaning has ever been attached and which owe their existence in languages in
general only to the intention > of inflection. " "The originally independent
significance of the

Suffixes are therefore not a necessary obstacle to the purity of genuine inflection. Words formed with such inflectional syllables appear just as definitely, as where inner

change takes place, only as simple concepts cast in different forms, and therefore fulfill exactly the purpose of inflection. However, this meaningfulness demands greater strength of the inner sense of inflection and more decisive phonetic domination of the mind, which has to overcome the degeneration of grammatical formation in the composition. A language which, like Sanskrit, makes chief use of such originally independently significant inflectional syllables, shows thereby itself the confidence which it places in the power] of the spirit which animates it." The following remarks are noteworthy because they correctly point out the connection that exists between the inflection and the sound formation as such. Humboldt was wrong, however, when he considered the phonetic changes to be deliberately caused for the purposes of grammatical relations, as has already been noted. This is a fundamental error in his view of the relationship between sound and meaning, the former of which appeared to him to be just as subject to the influence of human will as the latter. "The phonetic faculty and the phonetic habits of nations connected with it, however, also have a significant effect on this part of language. The tendency to connect the elements of speech with each other, to join sounds to sounds, where their nature permits them to merge one into the other, and generally to change them in contact according to their nature, facilitates the business of inflection, which aims at unity, just as the stricter separation of the sounds of some languages counteracts its success. If the capacity for sound now promotes the inner requirement, then

¹ The original sense of articulation becomes active and in this way the significant splitting of the sounds comes about, by means of which even a single one can become the bearer of a formal relationship, which is more decisive here than in any other part of language, since a mental direction is to be indicated here, not a concept. The sharpness of the articulatory faculty and the purity of the sense of inflection are therefore mutually reinforcing.^a

What he says at this point about agglutination is also not entirely clear and free of internal contradictions: "Between the lack of all suggestion of the categories of words, as is evident in Chinese, and true inflection, there can be no third thing compatible with the pure organization of languages. The only thing conceivable between the two is inflection used as a compound, that is to say, inflection that is intended but has not reached perfection, more or less mechanical addition, not purely organic formation. This hybrid creature, which is not always easy to recognize, has recently been called agglutination. On the one hand, this way of linking defining secondary terms always arises from the weakness of the internally organizing sense of language or from neglect of the true direction of the same, but on the other hand it nevertheless indicates the endeavour to give phonetic validity to the categories of the terms as well as not to treat them in this process in the same way as the actual designation of the terms. Thus, by not renouncing grammatical allusion, such a language does not produce it purely, but falsifies it in its very essence. It can therefore apparently and to a certain extent even really possess a number of grammatical forms and yet nowhere really

achieve the expression of the true concept of such a form. Incidentally, it can also individually contain real inflection through internal alteration of the words, and time can apparently transform its originally true compositions into inflections, so that it becomes difficult, indeed in part remains impossible, to judge each individual part correctly. But what truly decides the whole is the summary of all the cases belonging together. From the general treatment of these it then follows to what degree of strength or weakness the flexing endeavor of the inner sense exercised power over the construction of the sound. In this alone the difference can be made. For these so-called agglutinative languages differ from the

MORPHOLOGICAL CHARACTER OF THE BASIC ARYAN LANGUAGE. 199 flexing not by genus, as those rejecting all suggestion by inflection, but only by the degree to which their dark striving in the same direction more or less fails." x)

I have gone into Humboldt's morphogenetic ideas all the more extensively as it seemed necessary to me, on the one hand, to show on what a weak foundation the theory of the origin of inflection from agglutination, which has been accepted by almost all¹²³ linguists up to now, rests and, on the other hand, to show how important it is to direct one's main attention in all morphological investigations to the inner meaning of linguistic forms. In this respect, empirical linguistic research, after having turned its attention for too long to the one-sided observation of the external phonetic form, must return to the great philosopher of language in order to gain the correct understanding for this side of the investigation, for which it seems to have completely lost it.

The previous theory was believed to have powerful support in the history of the newer languages, especially the Romance languages, inasmuch as the endings of the latter (e.g. *j'irai* = *ego ire habeo*) are all of agglutinative origin and many of them currently appear to the linguistic senses as inflectional. Why should not the same process occur in the embryonic period of the basic Aryan language?

123*) Cf. on this point also Steinthal, *Charakteristik der hauptsächlichsten Typen des Sprachbaues*. Berlin 1861, D. 60.

124) An exception is Sayce, *The principles of comparative philology* 132 -174 (Chapter IV. The theory of three stages of development in the history of language), who discusses it in detail and aptly demonstrates its untenability. "Without doubt," he concludes his remarks, "the three stages of language mark successive levels of civilization: this much is proved by the subversion of the one civilization by the other; but each was the highest effort and expression of the race which carried it out, and the form which, by the Constitution of the mind of the race, each was necessitated to assume. Mankind progresses as a whole, but the several steps of advance are made by the appearance of different races on the scene, each with his mission, each with his pre-determined method of accomplishing it. The infusoria which to-day cover the bottom of the Atlantic have not changed since the era of the chalk; but for all that, the world of life on the globe has been steadily improving and growing, although the lion has always been a lion, and the dog a dog."

have also taken place? But here the outward appearance of sameness has deceived us about the inner differences in the formations. If we take any newly-arisen suffix in one of the modern Aryan languages which are wholly or predominantly agglutinative (e.g. French -ai, German *heit*) and trace its history of meaning, we see that from the very beginning the same suffix has been and could be added to the word by virtue of its original meaning (-ai=habeo; -heit=ahd. *heit* person, gender, order, kind) and that all later modifications of meaning can easily be mediated among themselves and traced back to the basic meaning. Nowhere are there any leaps, the development of meaning shows a straight, uninterrupted line everywhere. The situation is quite different with the genuinely inflectional suffixes of the old languages. Is it even possible to speak of a meaning in the strict sense of the word? Does the nominative -s as a sign of the masculine really mean as much as masculine and -m as much as neuter? Yes, even more. We find the same -s as a general case sign (for nominative, accusative and vocative, e.g. Latin *virus*), as a sign of the subject, as a sign of the animate and as a sign of the masculine. How can these multiple usages be reconciled? "And to what basic meaning can it be traced? For example, to the basic meaning of *sa* - here? How can the concept of the masculine be united with that of the subject? And yet the suffix -s can mark a word as both subject and masculine (e.g. Latin *ludu-s*). And how is it that it can also join feminines (e.g. lat. *humu-s*) and is not foreign to neuter nouns (e.g. lat. *virus*)? How could it suddenly lose its masculine meaning? All these questions remain unanswered if one holds on to the assumption that -s is just as agglutinative in origin as *deutsche-heit* and tries to explain it in the same way. What is true of -s is true of all other inflectional suffixes.

One could easily raise the objection against this kind of observation that -s has a much longer history behind it than, for example the German -heit and has already undergone the entire transition process from the agglutinative stage to inflection, while the suffix -heit is not beyond the first stages of this developmental process, but will later also reach the stage where we find the suffix -s, namely the stage of pure, unclouded inflection, in which the original meaning of -heit will also have completely shed itself, like that of the "hier" of *sa*. This objection can also be easily rejected. Besides this genuinely inflectional suffix -s, there are other suffixes that are still at the same stage of development as the German -heit, even though they were given the same time to undergo the inflectional moulting process as the suffix -s. These are, for example, the suffixes of the ablative and instrumental, which, like -heit, can be said to have a meaning in the true sense of the word and whose development of meaning shows the same straight line as the agglutinative suffixes of the newer Germanic and Romance languages. All usages can be traced back to

the basic concept of "to separate" or "to join" just as easily as the use of the French future tense (j'ir-) can be traced back to the French future tense (j'ir-). Futurum (j'ir-ai) can be traced back to the basic concept of habeo (I have to go == I will go). In these cases, the assumption of an agglutinative formation is absolutely permissible. However, these cases also show that in the question of whether a case is a flexive or agglutinative formation, the phonetic form provides no information at all, since agglutinative formations can be just as phonetically corrupt and just as firmly fused with the stem as flexive formations, and that only the development of meaning, or the use of a word form, provides a positive indication of whether we are dealing with a flexive or agglutinative formation. This must be noted as an important methodological principle for prehistoric linguistic research, which must not be approached from the outset with the preconceived notion that we will only encounter consistently flexive formations.

Even if the agglutinative formations of the period of protoethnic language development are not missing, the genuine flexive forms are in the overwhelming majority and they determine the character of the basic Aryan language. The further we move away from the common language period, the more the agglutinative formations gain the upper hand in most Aryan languages, displacing and replacing the flexive ones. At the same time, a comprehensive sound change is taking place. The final cause of these phenomena lies in the fact that, since the separation of the Aryans, many peoples (Turanian,

202 MORPHOLOGICAL CHARACTER OF THE BASIC ARYAN LANGUAGE. Semitic, Dravidian race) had been Aryanized and that these Aryanized peoples gradually, but with ever greater success, transformed the recent language of the conquerors phonologically and morphologically in accordance with their ancestral racial character.

This difference in the development of the prehistoric and historical language periods has long been pointed out, but without recognizing the cause and without seeing the actual contrast in what it is actually to be seen. Indeed, the contrast has even been sought in things where there is no such thing, and this is because the nature of inflection has not been properly recognized.²) But in order to get to know this, it is far more important - at least this much follows from these considerations - that we study the oldest historically attainable periods in the development of the Aryan languages with regard to all those morphological processes that can be observed here, than that we direct our attention to those new periods during which we see the agglutinative principle becoming more and more dominant. If it is at all possible to recognize the nature and origin of inflection, it is only possible here, where we may hope to find the same principle still at work that dominated the formation of forms in the preceding period of unity. This field has by no means been sufficiently explored, and it was mostly the doctrine that inflection was in its last stage of development.

*) Thus W.vonHumboldt distinguishes in his treatise: "Ueber das vergleichende Sprachstudium in Beziehung auf die verschiedenen Epochen der Sprachentwicklung" (Abhandl. der hist.-phil. Classe der Berlin. Academy. 1820-1821. Berlin 1822, p. 239-60. Ges. Werke. III. 241-268) in the history of the development of every language two periods: a period of organization and a period of finer formation, Schleicher (Comp. 4) a period of the development of language (pre-historical period) and a period of the decay of language (historical period), whereby he assumes that the transition from the first to the second period was a gradual one. Fr. Müller (Beiträge zur Morphologie und Entwicklungsgeschichte der Sprachen. I. Vienna 1871, 8.3) calls the first period the period of ascending development (through growth), the second that of descending development (through internal formation with phonetic decay) and notes for the Aryan languages that they can only be understood as descendants of an original language that has been absorbed into them and whose formation is already complete, in which all those forms that we find in the individual Aryan languages were already present.

origins are nothing other than agglutination, which prevented the realization of the ultimate causes of those morphological processes that are taking place here before us, and which ultimately led Aryan linguistic research to place greater hopes in the study of agglutinative languages¹) or in the essentially a priori constructions of the philosophers of language than in the study of their own historically attainable periods of development.

We will now take a closer look at these and examine some forms in more detail with regard to sound and meaning, in order to see whether the nature and origin of inflection can be recognized from them. To begin with, we will leave aside those inflectional forms which are formed by external addition by means of suffixes, although up to now they have usually been the ones by which the origin of inflection was thought to be best demonstrated, and we will pick out some forms in which the grammatical form is designated by other means.

Let us look at the Greek imperfect form *eXetzov* in and of itself and then compare it with the corresponding form in Old Indic. The latter contains as constituent elements: the stem (*xewto*), the personal suffix (*v*) and the augment (*e*). The two latter elements together make up the meaning of the preterite, in that it is linked both to the augment and, as will be shown later, to the secondary form of the personal suffix. In addition to this preterite meaning, however, this verbal form also has a secondary meaning: it denotes the action lasting in the past. What is this secondary meaning connected to? If we focus exclusively on the form *sXsiKov*, we cannot answer this question. The form corresponding to the Greek *eXewtov*

) Thus Scherer remarks in his methodological disputes ("Principien") in his "Geschichte der deutschen Sprache 29: "In addition to the projection from the present into the past, we have another methodological aid, which again shares linguistics with natural science and which has not yet been sufficiently exploited, indeed is hardly sufficiently recognized in its justification and fruitfulness. In the case of language, too, it seems possible to glean some information from the relationships of lower idioms about the earlier developmental phases of higher ones. The history of the original Aryan language can - it seems - only be reconstructed with regard to the so-called agglutinative languages."

The second form in Old Indian is *alaipam*. It is phonetically identical to the Greek form (apart from the weakening of the *a* to *s* and the *m* to *v*, of course), but differs in meaning in that it is a tense form for narration and simply expresses the past without including anything else, as is the case in Greek. which language shows the original state? The Greek or the Indian? Are we to assume that ancient Indian also once had this secondary meaning, which we find in Greek, and later lost it, or that it did not originally exist at all and only developed in Greek? We must also fail to answer these questions. The comparison of this verbal form in two languages has thus contributed nothing to answering the first question, but has rather led to the raising of new questions, which also could not be answered.

Let us now look at the Greek aorist form IXtKOV in the same way. It contains the following constituent elements: the stem (Xwro), the personal suffix (v) and the augment (e). In addition to the meaning of the preterite, this aorist form also has a secondary meaning: it denotes the action occurring in the past. What is this secondary meaning linked to? If we focus exclusively on the form eXt-ov, we must also fail to answer this question. The form corresponding to the Greek ektzov in Old Indic is alipam. It is phonetically identical to the Greek form, but also differs in meaning in that in the older language it has the meaning of an actual perfect, i.e. it denotes something past that is completed with reference to the present; it thus corresponds completely in meaning to the Greek perfect and not to the aorist.²) Which language shows the original meaning? The Greek or the Indian? And how can the meaning of the action occurring be united with that of the completed action and to which basic meaning can it be traced? To all these questions o^{raen} we can give no answer, although these forms are phonetically without difficulty, their construction is highly

*) Whitney, Indian Grammar. Leipzig 1879, §. 779.

²) Whitney, In d. Gramm. §. 928; Delhrück, Altind. Tempuslehre 87. degree is transparent and its use syntactically perfectly certain.

However, we are immediately in a position to answer these questions if, instead of considering the form eXSIKOV on its own or at most comparing it with the formally corresponding form in Old Indic, we relate it to the phonetically close form eXITCOV and compare them with each other. It can now be seen that these two forms differ from each other only in that the root of one form contains st (ai) and the other i (Xetz Xi~). It is immediately obvious that only this phonetic difference must be the cause of the difference in meaning mentioned above. But is there something in this phonetic difference between the two forms that could explain their specific meaning? Does the i of the old Indian form, for example, express the completed word as opposed to the ai? Or in the Greek form, in contrast to et, the expression of the entering? Obviously not. Otherwise it could not denote in the one case the completion, in the other the occurrence of the action. So if (t) denoted neither the one nor the other, how did the word form come to designate an action as occurring or as completed? It came about because the speaker, once he had become aware of the phonetic difference between the two forms when the meaning was identical, decided to use one of these forms in a concise meaning, i.e. to combine a secondary meaning with the actual meaning, which received its external sign in the phonetic difference between the one otherwise identical form and the other. In any case, this innovation was originally only an indi-vidium and was only gradually adopted until it gained general validity through universal acceptance. And this s u b j e c t i v e character of the word form from the very beginning is also shown by

the fact that the Indians associated a different secondary meaning with the same word form and the Greeks another, something that would otherwise remain completely inexplicable. The fact that originally only one of the two forms uniting to form a group was used in a concise meaning is clearly shown by the Indians, who used the so-called imperfect form only as a simple preterital form without any secondary meaning.

The phonetic relationship of the two roots *lip* to *laip*, or of *i* to *ai*, namely whether *ai* developed from *i* or, as some more recent linguists have assumed, *i* from *ai*, is irrelevant to our question. What is certain is that one form of the root is younger than the other, that the sound change occurred unconsciously and unintentionally and that it was only later that the double forms created by this sound change, which initially remained unchanged in their meaning, were made useful for the purpose of grammatical designation.

That such secondary meanings, which attach themselves to one of the double forms thus created, are of purely subjective origin and have no material basis in the objective meaning of the body of the word as a whole or one of its parts, which is removed from the subjective will, is also proved by the fact that they can easily be discarded like a dispensable garment. Thus the Indian aorist has completely lost its perfect meaning in the later language and now functions only as a simple preterite like the imperfect, which conversely is occasionally used in the aorist sense to denote a completed action.²⁾ But the fact that the *s* (*sa*) of the sigmatic aorist forms, which in their use correspond perfectly with the asigmatic ones, cannot go back to *as*=*sein*, i.e. -to a root of substance, must be regarded as certain after these explanations, even without considering the phonetic difficulties. From the term "to be" the meaning of completion cannot develop in the one case, in the other that of the occurrence of an action. The two meanings are mutually exclusive, and the same word which at one time denotes the concept of completion cannot at another time denote the concept of beginning. Such absurdities should never again be expected of language.

If we have so far considered the two verbal forms *eXet-rcov* and *ekiuov* in both Greek and Old Indic in relation to the time \wedge rt (occurring, lasting, completed action), it is now obvious to consider them in relation to the time stage (present, past, future),

¹⁾ Whitney, Ind. gram. §. 927.

²⁾ Whitney, op. cit. §, 929.

MORPHOLOGICAL CHARACTER OF THE BASIC ARYAN LANGUAGE. 207 in order to see whether the designation of the tense occurs in the same way as that of the tense. It is generally assumed that the augment (e), which is traced back to the pronominal root a = then, gives the verbal form (e.g. ṛt(hjy)) its preterital meaning. However, the Veda and the language of Homer show a large number of augmentless forms with preterital and (in the Veda) conjunctive meanings (so-called spurious conjunctives). The question now arises as to what these meanings are linked to. Obviously not to the augment, because these forms do not have this; it is impossible to think of the stem (rifhj) or the personal suffix (-v) from the outset. And yet the form Tfthj-v , if it occurred, would be externally marked in such a way that everyone would recognize it as an imperfect. So what is this characteristic? This characteristic lies in the phonetic form of the personal suffix -v (from -m=ma=ich) insofar as it differs from the phonetic form of the personal suffix of the present tense -jit JJLI). Apart from this phonetic difference, however, the two personal suffixes -ma and -mi have the same meaning; both mean I. This difference in the external phonetic form was now used to differentiate meaning, just as the phonetic difference between i and äi (lip and laip) was used to do so. People gradually became accustomed to associating a secondary meaning with the material meaning of one or the other suffix (ich), the strictly subjective origin of which can still be clearly recognized in the fluctuation in usage.

It is known that the so-called augmentless indicative forms of all preterite formations in Old Indian are used conjunctively and are much more numerous than the real conjunctive forms.¹²⁵) On the other hand, the aorist form in the Veda often has the same meaning as the present tense^{126 127}) and vice versa, the present tense has a preterite meaning.⁸) This fluctuation in usage, this diversity in the use of one form, still clearly shows us the state of the language when the first attempts were made, still uncertain and tentative, to endow one of the two double forms -ma and -mi with some secondary meaning. Only gradually did the use become more definite and more extended (the

125^j) Whitney, op. cit. §. 869.

126) Whitney, op. cit. §. 930.

127) Whitney, op. cit. §. 777 and 778.

Greek no longer recognizes the use of augmentless preterital forms in the conjunctive sense) and it contributed not a little to this that it was decided to make use of the linguistic means of agglutination for this purpose. In order to better indicate the preterital meaning, the pronominal prefix a= was later placed in front of the verbal forms, just as the flexive casus prepositions were added to the nouns for the same reason. In this way, the verbal forms formed with the personal suffix -ma were later only used in an exclusively temporal sense, although the -ma inherently contained neither the concept of a time (past) nor that of a mode (conjunctive). But neither can it be assumed that the preterital meaning is only carried by the augment a. If this were the case, then augmentless preterita, as found in the Veda and in Greek, would be completely unthinkable.

How the phonetic form ma relates to mi can remain undiscussed here. For me it is certain that one cannot be derived from the other (mi from ma), but that they were both originally phonetically different from each other, as the pronominal declension also teaches, where both roots underlie the case forms next to each other (mi-hi, on the other hand mei, me etc.).

In addition to confirming earlier observations, this observation has brought to light another important aspect. It concerns the great fluctuation in the use of a flexival form, the indeterminacy of its syntactic use and the later delimitation and restriction of its meaning. In this respect, flexival formations differ substantially from agglutinative ones. The more the latter move away from their origin, the more they expand their meaning and thus also their use. This is an important criterion for distinguishing flexive and agglutinative formations.

I cannot resist including the mode elements in this consideration. As we know, the two elements -a (for the conjunctive) and -ja (for the optative) appear as such. From the point of view of later Greek, one might be inclined to regard them as different in their origin. Homer's language alone shows a significant variation in the use of the conjunctive and optative forms. In Latin

There is no difference in usage between the same forms (lau* dem is optative form, carpam is conjunctive form); moreover, both forms are used in a temporal (futuristic) sense (carpam, carpes). Similarly, in the oldest phase of Old Indic, conjunctive and optative forms run parallel to each other in terms of their use.)¹²⁸

From this we can see that originally there was no difference at all in the use of the conjunctive and optative forms, that the first use was a very extensive one (mode and tense) and only later in individual languages (Indian and Greek) was it restricted and became more definite. In view of this, is it still possible to look for a separate starting point for the optative and the conjunctive and to trace the element -ja back to a root of substance, such as sanskr. i = to wish? This is impossible for the simple reason that we would then also have to assume an equivalent root of substance for the conjunctive, whose use was by no means different from that of the optative. And should a be this substantive root? I have, however, proven such a root¹²⁹), but with the meaning "to connect", from which, however, the conjunctive-futuristic use can in no way be derived. It follows from all these discussions that -ja and -a are inflectional elements that were originally without modal-temporal meaning and whose phonetic difference was only later and gradually made useful for grammatical designation. The earlier history of -ja and -a, their ultimate origin, cannot be discussed further here, as it lies entirely outside the realm of historically accessible language periods and can only be clarified in an overall description of the prehistoric period of development.

The same processes that we have observed so far with the verb can also be observed with the noun. A few examples from this area may therefore be given. The stems on -i and -u in Old Indian have the endings -jā, -vā or -inā, -unā without distinction in the instrumental of all three genders in the Veda. Later we find that only the masculine and neuter have the endings -inā, -unā, while the feminine -iā has -uā. This

128*) Whitney, op. cit. §. 576 and 581.

129) Penka, Indo-European. Nominal inflection 136.

The gender is also indicated in the instrumental. There is no need to say that the *n* between *i* (*u*) and *ä* is not a direct expression for either the masculine or the neuter. Here too, linguistic usage has used the formal difference between the various instrumental endings, which could have remained unused, to designate the gender in a case that would otherwise have had to do without this designation. The Vedic still clearly shows the beginning of this use. The ending *-inā* for the feminine does occur, but only very rarely. *) This *n* later penetrated from the instrumental into other endings and the resulting double forms were used in a similar way. The forms with *n* were used as neutral designations in contrast to the forms without *n*, which were used as masculine and feminine forms. And in order to complete the gender designation, the endings of the feminine *ä*-declension were added to the feminine stems (masc. *agnājS*, femin. *gātaje* and *gātjāi*, neuter *vārine*).

This also explains the forms of the nominative plural, the *-a* declension in Latin, namely *-i* (from *ei* = *ai*) and *-ae* (from *ai*). Since both progressive and regressive assimilation were effective, double forms were created and these were used to distinguish gender. The same is true in Greek with the endings *-oc* (genitive sing, the *-conson.* declension and *-sc* (nomin. plural of the same declension), as both go back to a basic form *-as*, whose *a* is known to have split into *e* and *o*. -

Changes in the accentuation of a word also gave rise to double forms, and these were not left unused either. Thus there are a number of cases in Old Indian where a noun *agentis* appears to be separated from the noun *actionis* only by the accent, e.g. *apas* work and *apās* active, *tāras* speed and *tarās* fast.)^x

These explanations should suffice to give a correct idea of the origin and nature of the inflection

¹) Whitney, op. cit. § 336.

²) Whitney, op. cit. §. 1151* in its contrast to agglutination. For the rest, I refer to the explanations I have already given elsewhere. To express briefly the difference which exists between inflection and agglutination, we may say: inflection is *indi recte*, subjective intimation, agglutination *dir ec ter*, objective expression of some grammatical relation. Both types of grammatical designation have their advantages and shortcomings. It is quite unjustified to speak only of the merits of the flexive principle and to deliberately or unintentionally conceal its defects. Its main shortcoming is that the use of all genuinely flexive forms is more or less indeterminate and vague. Ambiguities of all kinds were therefore unavoidable as long as the flexival principle was still in force. This is also the reason why it is so difficult for us moderns, who speak mainly or exclusively agglutinative languages, to understand foreign purely flexive languages, so that only after a long period of effort do we gain the confidence in the use of their forms that we acquire after a short time in the use of agglutinative forms and agglutinative languages in general. On the other hand, the flexive principle

of the nature of the speaking subject allows greater freedom in the design and use of linguistic forms and makes it possible to give brief formal expression to certain nuances of conception which could either not be expressed at all by agglutinative means or could only be expressed by cumbersome paraphrasing. On the other hand, the agglutinative expression is clear, definite and excludes any misunderstanding, and is therefore particularly suitable for all those representations in which sober, rational consideration comes to the fore. This is the main reason why agglutinative formations (by means of prepositions and postpositions) are used far more frequently in prose than in poetry, but why, conversely, agglutinative languages prove to be less suitable for all those genres of poetry in which the imagination reaches its full development.

In the languages of all those Aryan peoples who consist exclusively or predominantly of Turanian elements, the agglutinative principle has come to dominate exclusively or predominantly. The immutability of the racial characters is also evident in this more intellectual field. The Romance languages, and among them French, have moved furthest away from the basic flexive character of Aryan. With regard to the German language, it should be noted that the vernacular has progressed further along the path of agglutinative transformation than the written language, which retains an older linguistic state. Let me remind you, for example, that in many parts of Germany, especially southern Germany, the old inflectional past tense (*gab*) has almost completely disappeared from the language of the people and is replaced by the agglutinative perfect tense (*hat gegeben*). Similarly, the inflectional genitive of the noun is replaced either by a prepositional compound or by the dative with the possessive pronoun. Instead of "the judge's house", it is either "the judge's house" (cf. French, *la maison du juge*) or "the judge's house" (cf. Hungarian, *a bironaka háza*). *) By the way

) The Celtic idioms also show similar phenomena. Sayce The principles of comparative philology 189 remarks on this: "Mr. J. Rhys in his Presidential Address to the Liverpool Gordovic Eisteddfod of 1874, stated the results of his examination of the idiomatic peculiarities of the Keltic languages, which throw a new light on the early fortunes of that branch of the Aryan family, and give a fresh Illustration of the way in which idioms may be borrowed. Traces of Basque influence, he believed, were to be found in the incorporation of the pronouns between the Irish verb and its prefixes, a phenomenon which exceptionally appeared in Welsh (as in *rhy-*m-dorai*, "it would concern me", *Dofydd rhy-'n-digones*, "the Lord made us"), as well as today's written language, that it has not remained entirely untouched by this agglutinative direction taken by the vernacular, and it is very doubtful whether the former will continue to be able to ward off the further intrusion of agglutinative formations with the same success as before.

The Aryan Semitic and Dravidian elements had a similar influence on the morphological structure of the Iranian and Indian languages in Asia as the Turanian

elements had on the morphological structure of the Aryan languages in Europe. This influence is particularly evident in the New Iranian (New Persian) and New Indian idioms. But it is also evident in the language of the Avesta, as Spiegel has shown. It includes the use of the feminine to designate a neuter (or abstract), the use of the verb in the plural or singular after a dual, that verbal nouns govern the case of their verb, etc. In the Indian languages, the Dravidian influence is initially quite evident in the declension of the noun. The various casus are no longer formed as in Sanskrit by changing the final syllable, but as in the agglutinative South Indian languages by postpositions which are attached to the oblique form of the noun, i.e. in an agglutinative way. For example, in Gujarati dev-ma in god, in Hindustani adh6-me in blind, the suffixes ma, me (literally "in the middle") replace the Sanskrit locative suffix i. These suffixes mā and me go back to the Sanskr. These suffixes mā and me go back to the Sanskrit stem madhja Mitte and exercise their present function only through their material meaning, whereas the Old Indian suffix i had a purely flexival-formal character. Müller is not correct when he claims²), in the Breton verbe to have. So, too, the differentiation of the verb and noun, which had been effected at an early time in Aryan, has been partly effaced in Welsh, as though the latter language had come into contact with one in which the verb and noun were not distinguished; thus the infinitive is always a noun, and. the common construction myfi a'ch gwelais, "I saw you," is literally "I your saw." The inflection of the Welsh prepositions (erof, "for me", erot, "for thee", erddo, "for him") and of the substantive yreiddof, "my property" ("mine"), finds its analogue in Magyar, suggesting that the Kelts had once held intercourse with a race which formed the link between the Basques and Finns."

Spiegel, Aryan Studies. Leipzig 1874, pp. 45-61.

²) Fr. Müller, Grundriss der Sprachwissenschaft. I. J, p. 47. the grammatical determination of these word - compounds does not lie in the second member, but only in the form-forming -i at the end (* döva-madhje from* deva-madha + i), which later fell off without a trace, so that döy-ma is formally just as indefinite as dev. However, it would then remain inexplicable why the stem madhja would have appeared at all, even "apart from the fact that the phonetic form of mā provides no reliable evidence for the assumption that the locative suffix i was dropped later. Such attempts at explanation show quite clearly how little one is still inclined today to follow the same principle of explanation in the field of morphological phenomena that has been followed for a long time in the field of phonetics, especially Indian phonetics, and indeed with the agreement of most linguists. Today it is almost universally assumed that the Sanskrit linguals, for example, can only be explained by the Drav. Linguals, for example, are now almost universally assumed to have originated from the Old Aryan dentals only through Dravidian influence, and all other attempts at explanation can be regarded as abandoned. Hopefully the near future will help the same principle to triumph in the field of form theory.

Corrections and supplements.

page ,	line 23	from above,instead of	read textbook.
Page 12,	line 22	from above,instead of	read Gypsies and Armenians.
Page 20,	line 23	from above,instead of	tribal differences read status sub-
differences.			

Page 27, line 22 from top, instead of main areas read main distribution areas.

Page 38, line 17 from the top, instead of designated reads means.

Page 39, line 13 from the top. As the name Hvíttramaland (White Man's Land) shows, the Normans in America also gave themselves a name with the same meaning.

Page 74, line 14 from above. In recent times, Marquis Saporta has also expressed views on the homeland of man, which essentially amount to the same thing that I have discussed in connection with M. Wagner's hypothesis in the fourth section of this book. In his "Essai de Synthèse paléoethnique" published in the last issue of the *Revue de deux mondes* (May 1883), the famous French paleontologist arrives at the following conclusion (p. 94): "On voit que nous sommes enclin à reculer au nord, jusque dans les régions circumpolaires, le berceau probable de l'homme primitif. De là seulement celle aura pu rayonner, comme d'un centre, pour s'étendre dans plusieurs continents à la fois et donner lieu, après s'être différenciée sur place, le long des plages de la mer polaire à des émigrations successives, véritables essaims destinés à se propager, à se pousser et à se remplacer tour à tour, jusqu'au moment où chacun d'eux se sera cantonné dans une région à part plus ou moins avancée vers le sud et s'y sera arrêté pour revêtir des caractères et des aptitudes délimités. This is the theory that corresponds best with the presumed path of human races. Il s'agit de démontrer quelle est également conforme aux données géologiques le plus autorisées et en même temps les plus récentes, enfin qu'elle s'applique, en de dehors de l'homme, aux plants et aux animaux qui ont accompagné ses premiers pas et qui lui sont restés le plus étroitement associés au sein des régions tempérées devenues plus tard le siège de sa puissance civilisatrice."

Page 123, line 11 from top, instead of Keltae read Celtae.

Page 123, line 3 from the bottom. The name *Atdoxoupoi* means, depending on whether one takes the stem *ἄτοξο* in a transitive or intransitive sense, as much as "those who illuminate the darkness" or "those who shine in the darkness" and it is therefore natural that they, as gods of light, came into conflict with the representatives of darkness, the *Apharides* (the "lightless").

Page 131, line 6 from the top. In the heroic songs of the Thracians, who were initially related to the Hellenes, the memory of the battles of the Thracian-Hellenic Aryans with the Scythians lived on for a long time, as can be seen from the songs still sung today by the Bulgarians in the Rhodope Mountains, which according to Geitner's investigations (*Poetische Thrakien i Bulharien*. Prague 1878) are for the most part of Thracian origin. Of particular interest for our question is, first of all, the book translated by Geitner and published by Fligier in the *Mitteilungen der Wiener anthropologischen Gesellschaft* (IX. 171), translated by Geitner and published by Fligier. Significantly, these songs also mention the city of *Arjana-grad* (= Aryan castle).

Page 132, line 18 from above. However, it must not be assumed that the entire land occupied by the Cimmerians (Aryans) was abandoned. To the west of the Pontic Slavs (in the present-day territory of the Poles), Aryan rule had been maintained, which was all the easier as these lands were more removed from the onslaught of the peoples coming from Asia than the regions to the north of Pontus. This Aryan rule continued almost uninterruptedly in the form of an aristocratic republic until the fall of the Kingdom of Poland, and the numerous Polish nobility - the descendants of the ancient Aryan conquerors - are still a social power in all the lands formerly subject to Polish rule. This explains why the characteristics of the Aryan type (blond hair, blue eyes, white skin color) are far more common among Poles than among the Little Russians and Ruthenians, and why there is no evidence of a national nobility among the latter. If the Great Russians, whose land was Slavized from Little Russia (cf. Bidermann, *Die ungarischen Ruthenen*. II. Theil. Innsbruck 1867, p. 22), show a stronger admixture of Aryan blood in their physical type than the Little Russians, this is because the northern Finnish

indigenous population had already experienced an Aryan admixture (cf. p. 68) from time immemorial and the Norman invasion that took place in historical times brought new Aryan elements to the north. The political superiority of the Great Russians over the Little Russians is based on these Aryan elements. However, the difference between the Great Russians and the Little Russians is not as great as that between the Russians in general and the Poles, especially the Polish nobility. What is true of the physical type of the Little Russians is also true of the physical type of their dependencies, the South Slavic peoples of the Serbs, Croats, Bulgarians and Slovenes.

Page 203, line 5 from above. The morphological relationship of the Aryan languages to the Semitic languages, where the assumption of an agglutinative origin of the inflection is ruled out in advance, should have warned us to be cautious. It is worth noting that P. Hunfalvy (*Ethnography of Hungary*, German by Schwicker. Budapest 1877, 8. 16) attributes the inflectional character only to the Semitic languages, which he was fully justified in doing from the point of view of the previous theory.

K. k. Court book printer Karl Prochaeka in Teschen.

²⁾ Whitney aptly remarks, *Leben und Wachsthum der Sprache*. Leipzig 1876, p. 294: "The classifications and relations of the languages retain their validity independently of any questions about the race relations of the peoples concerned; but nevertheless such questions must not be suppressed and overlooked by the linguist, his science belongs so much to historical research and has so much to do with race and folklore in the later periods that it must not ignore this element for the older period either. Since it is one of the main departments of historical research and wants to make its contribution to the elucidation of the past, it must accept that its results are evaluated and examined by every other department of science working in the same direction. Exaggerating its claims and placing them in the wrong place is not only useless, but harmful."

³⁾ This view was first expressed by Pott (in the article: "Indogerman. Sprachstamm" in *Erseh and Gruber's Encyclopädie* 19): "Vans Kennedy considers Babylon, alā early seat of civilization, but without being able to provide any other reasons, to be the original home of the Indo-European tribe. There can be no doubt that we have to look for it in Asia, and furthermore hardly anywhere else than within the longitude from the Tigris to the Indus, only higher northwards, for example in the region of the Oxus and Jaxartes, on the northern slopes of the Himalayas towards the Caspian Sea. After considering all the circumstances, it is to these regions that we can most safely assign the point of separation, from where the two main currents of the Indo-European peoples seem to have moved in divergent directions." Lassen (*Ind. Alterthumskunde*, I 511) and J. Grimm (*Geschichte der deutschen Sprache*. I. 6, 162) have expressed the same view of the Asiatic origin of the peoples of Europe. P i c t e t also still believes in the

second edition of his "Les origines indo-europeennes" (I. 68) to have to adhere to the Asiatic origin of the Aryans. Spiegel (*Eran. Alterthums- kunde*. I. 428 and *Ausland*, 1871, p. 553) considers the hypothesis of Asiatic origin to be just as justified as the hypothesis of European origin, and regards the whole question as still unsolved. Höfer (*Zeitschrift für vergleichende Sprachforschung*. XX. 383) decides in favor of Asia because Zend and Sanskrit come closest to the common basic language, an argument that is also often used by the defenders of the Asian hypothesis. Mythological considerations determine H. v. Wolzogen (*Zeitschrift für Völkerpsychologie und Sprachwissenschaft*. VIII. 14) to adhere to the assumption of the Asiatic origin of the Aryans. The objections raised by Höfer and Wolzogen against Benfey and L. Geiger are in part completely irrelevant, and in part will be dealt with

in the following discussions. In 1879, at the suggestion of H. Martin, the question of the original homeland and the original type of the Aryans was discussed at several meetings of the Paris Anthropological Society, and the most eminent French anthropologists (H. Martin Topinard, Pietrement, de Ujfalvy, Daily, Mde. Clemence Royer, de Mortillet, Girard de Rialle) took part in the discussions (cf. the Bull. de la Societe d'anthropologie de Paris. 3. ser. II. 183-214; 219-252; 344-357; 443-461). Both views found their advocates; but the question was not brought to a decision. In recent times the old view of the Asiatic origin of the Aryans has found new defenders in Sayce (Introduction to the Science of language. II. London 1880, p. 121) and Hovelacque (La linguistique. Paris 1881, p. 404); but they have not brought forward any new arguments.

¹⁾ Latham in his edition of Germania. London 1851, p. CXXXVII. In his later works, too, he almost adhered to the hypothesis first put forward there, as also in his "Elements of comparative philology". London 1862, p. 661.

*) The statements of several ancient writers (Quintil., Declam. 3, Polyaen. VIII. 10, Plut., Marcus 10) that the Cimmerians, who in early times undertook invasions into Asia, are only a part of a people whose largest and most warlike part inhabited a shady, wooded country, which is only slightly warmed by the sun and for which the pole stands almost over the top. At first it was called Cimmeria, later Cimbri. Cf. on this Ukert, Germania 324 and Scythia 343. The word Cimmerian is therefore an old name to designate the original Aryan people.

²⁾ Ameis, Homer's Odyssee. I. vol. 2. booklet. Leipzig 1865, p. 109. It is probably more correct to translate the word Kimmerier as "men of the dark land" and to trace it back to a word *kimeriä (*kameriä) = dark land of the tribe kamara dunkel.

*) Broca, La race celtique ancienne et moderne in the Revue d'anthropologie. II. 377.

²⁾ The root ski is the basis: Greek gzta shadow, gxta-pd-c shady, etc., oxl-po; overgrown land; Latin cae-cu-s (from *skai-ka-s from the root ski with prefixed a); Old Irish sclath (from *skai-ta), Old English scoit scutum, caech blind; Old Latin sti-tū goth. haih-s blind. From the root sku go back: Sanskr. sku-nā-mi cover; Greek ozu-roc., x6-*roc skin, GZSU-T) clothing, Gxu-X-d-co cover; Latin ob-scū-ru-s, scū-tu-m, cū-ti-s (occulere, occul-tus); Belarus. skū-ra fur, skin; ags. skū-a, scū-va umbra, caligo, ahd. skiu-ra receptaculum. Cf. Curtius, Grundzüge der griech. Etymologie 146, 169 and Fick I. 240. AioGxoupot =* AtFo and Gzoupo (ob-scū-ru-s) i.e. day and night also belong here. It is therefore wrong to write Atū's-xoupot and to change the initial G from Gzoupoi to Ato (zoupot Attfch The drop of the initial s from ska, ski, sku is not an unusual phenomenon..

*) Anderson, Studien zur Vergleichung der indogermanischen und ugro- finnischen Sprachen 70.

*) Cf. Fick I. 35, 38, 39, 40, 56, 85, 89, 92, 95, 97, 141, 149, 169, 176, 224, 237, 240, 244, 247, 253.

²⁾ Curtius, Grundzüge der griech. etymologie 501.

*) Schleicher, Comp. 268, 270.

²⁾ Scherer, Zur Geschichte der deutschen Sprache 166.

³⁾ Schleicher, op. cit. 273, 280.

⁴⁾ Bopp, Vergl. grammar. 2nd ed. I. 120.

11*

*) Penka, Indogerman. The correctness of the theory of the origin of inflection developed there for the first time also results from the fact that it has become possible for me to explain all forms of Aryan nominal inflection (stem formation and case forms) in a simple and unconstrained manner, whereas all earlier attempts to prove agglutinative formations in all case endings were decidedly unsuccessful. In- [structively for the complete understanding of the whole process by

which the flexi

The double forms with differentiated meanings, which are so common in modern languages, but which can be proven to have had the same meaning in a previous, older linguistic period, are the result of the Germanic formation. Today, for example, the German words Knabe and Knappe have different meanings, but in the Mhd. they were completely synonymous and both combined the different New High German meanings. Numerous examples and the entire literature on this question can be found in Paul, *Principien der Sprachgeschichte*. Halle 1880, p. 134.